



THE TECHNICAL UNIVERSITY OF KENYA



POSTGRADUATE | UNDERGRADUATE | DIPLOMA | CERTIFICATE

PROSPECTUS 2015/2016

Education and training for the real world

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Our industry partnerships and international networks have continued to grow in leaps and bounds. The collaboration between the University and Samsung Electronics has eventually led to the establishment of an academy within the institution.

PROF. DR.-ING. FRANCIS W. O. ADUOL | VICE-CHANCELLOR

OUR CONTINUED UNIVERSITY-INDUSTRY PARTNERSHIPS PROMOTE THE REALISATION OF KENYA VISION 2030

The Technical University of Kenya has been established as the first technical university of the country as envisaged in the new laws governing higher education and in line with Vision 2030. This is a new frontier in university education in our country and the region at large, and the university is expected to provide leadership for this effort. The Government and other stakeholders expect that this University will provide the necessary human capital with world class technical skills to address the development challenges of the nation. Besides, the institution is required to mentor other technical institutions and develop benchmarks that would establish international quality standards for technical education in Kenya. These are not enviable responsibilities for an institution that has just joined the league of universities and now expected to operate in the competitive and elitist environment of global giants like the MIT.

In pursuit of its mandate, the university has recorded a number of remarkable achievements since the award of the charter even as it faced some challenges. In 2013, TU-K Council approved the new structure as envisioned in the Charter and management embarked on its implementation immediately in January 2014. The structure is designed to reflect the mandate of the university and the desire of the Government to create an institution of higher education that nurture a special and new breed of graduates with practical skills to join the market as doers of things and providers of solutions to employers.

Our industry partnerships and international networks have continued to grow in leaps and bounds. The collaboration between the university and Samsung Electronics has eventually led to the establishment of an academy within the institution. The Samsung Academy is meant to boost the practical training of not only our students, but those from other universities, in the areas of refrigeration and electronic appliances for home use. In August 2014, Safaricom CEO, Mr. Bob Collymore paid a visit to the University. After engaging with the faculty and students, he pledged his organisation's support for the construction of a modern telecommunication laboratory. Earlier on, the university enhanced its long standing partnership with Toyota Kenya by establishing the Toyota Academy in South B, Nairobi, to increase our capacity in the industrial training of our students in the School of Mechanical and Production Engineering. All these industry partnerships are geared towards fulfilling our goal of producing hands-on graduates who hit the job market running.

We received our first year students in September 2014, and like in the previous year, we received the highest number of students for our engineering programmes. Today, we remain the largest engineering school in the region. Our numbers continue to grow both for students and staff. The Senate is determined to keep the tradition of not staggering our academic calendar as happens elsewhere and for this I wish to appreciate the support from our student leadership, Council and our partners. I wish to assure you and our stakeholders, that the University Management will always ensure that the academic environment is most conducive. We are confident that our vision is attainable; TU-K will be a top rated university of technology!

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EDUCATION AND TRAINING FOR THE REAL WORLD

WHY TU-K STANDS TALL AMONG PEERS

At the inception of the Technical University of Kenya predecessor, Kenya Polytechnic, the main goal was to improve skills to employees in the industry. This led to the choice of the strategic location within the capital city of Nairobi from where students would have access to the most resourced industries and institutions suitable for industrial based learning (attachment). By extension, therefore, our students are exposed to environment that prepares them for future life and gives them opportunity to interact with prospective employers thereby reducing the time they spend on job-hunting after completion of studies. The University is located along Haile Selassie Avenue, yet sufficiently separated from the busy city life. It is also very close to the Nairobi National Park, the only game park of its kind in a capital city in the world, is ideal for relaxation after long session of studies. The corporate name of the Technical University of Kenya, when linked to its predecessor, reminds people of all generations, the positive contributions toward human capacity development that the institution has made in the East African region.

THE Technical University of Kenya has a long distinguished history as a leading institution for the training of technicians in Kenya and East Africa. The institution was established in the 1950s, initially as the Kenya Technical Institute (KTI) in Nairobi. KTI prepared students for certificates in various technical and vocational disciplines. The plan then was that the graduates of the institution would get admission into the Royal Technical College of East Africa (RTCEA), the predecessor of the current University of Nairobi, to pursue studies leading to the Diploma qualification. In 1961 the mandate of KTI was expanded to include studies leading to the award of Diplomas and consequently the institution was reconstituted as the Kenya Polytechnic.

The Kenya Polytechnic has been an integral part of the country's development. It has evolved to cope with the challenges that arose as a result of growth of the nation. For a long time, the institution operated as Kenya's premier polytechnic before it was elevated to a degree awarding institution in 2007 thereby becoming the Kenya Polytechnic University College, a constituent college of the University of Nairobi and awarded degrees under the name of the University of Nairobi. In January 2013, the institution was granted a Charter to become a fully-fledged university and was renamed The Technical University of Kenya, marking a major milestone as the first technical university in the country.

The Technical University of Kenya (TU-K) is one of the special public universities

Our academic and industry based learning modules are designed and structured towards the empowerment of students to become entrepreneurs and industrialists.

in Kenya whose strategic objective is not only teaching and learning, research and innovation, but also community service and extension. TU-K offers education and training that focuses on application of technological knowledge and skills. The University also engages in research with emphasis on practical solutions of immediate and future societal problems. Innovation is a major guiding factor in research at TU-K and is expected to influence all aspects of the institution's undertaking especially in the management and administration of its courses and resources.

As the first technical university in Kenya, TU-K is designed to ignite the process of industrialization by providing leadership in the advancement of economic development in the region. Our focus is on 'making business sense' of innovations in the development of new products and markets. To achieve our practical goals in training, all our academic programmes are developed in consultation with industry and corporate stakeholders to make them relevant and useful in the 'real world'.

Our academic and industry based learning modules are designed and structured towards the empowerment of students to become entrepreneurs and industrialists. The strength of the graduates at TU-K lies in their ability to practically apply the skills acquired through their training to address both the local and global challenges by providing solutions through innovation. The versatility of the graduates is

not only attested to by the continued demand and ready acceptance by industry but also their preparedness for self employment, hence the ultimate creation of job opportunities for other job seekers.

It is in this breadth that we recognize that we provide an enabling environment to nurture and develop scientific discovery, inventions and innovations into commercial products and services needed for economic and social growth of the national development agenda. The University offers technical programmes in three broad areas of study, namely: engineering sciences and technology, applied sciences and technology, and social sciences and technology. The academic programmes lead to the award of certificates and diplomas, and the conferment of both undergraduate and postgraduate degrees. The University has recently adopted a new organisational structure, which encompasses the following academic units:

FACULTY OF ENGINEERING SCIENCES AND TECHNOLOGY

1. School of Architecture and the Built Environment
2. School of Electrical and Electronic Engineering
3. School of Infrastructure and Resource Engineering

4. School of Mechanical and Process Engineering
5. School of Surveying and Geospatial Sciences
6. Centre for Engineering Innovation and Production

FACULTY OF APPLIED SCIENCES AND TECHNOLOGY

1. School of Biological and Life Sciences
2. School of Computing and Information Technologies
3. School of Health Sciences and Technology
4. School of Mathematics and Actuarial Science
5. School of Physical Sciences and Technology
6. Centre for Science and Technology Studies

FACULTY OF SOCIAL SCIENCES AND TECHNOLOGY

1. School of Business and Management Studies
2. School of Creative Arts and Technologies
3. School of Hospitality and Tourism Studies
4. School of Information and Communication Studies
5. School of Social and Development Studies
6. Centre for Creative and Cultural Industries

ACADEMICS, RESEARCH AND STUDENTS



The University Library offers teaching and learning resources in print and electronic form, and conducts training and registration of library users to promote reading and research



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Deputy Vice-Chancellor

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FUNCTIONS OF THE DIVISION

The Office of the Deputy Vice-Chancellor Academics, Research and Students (ARS) provides professional and administrative support to the university administration and faculties. The DVC, Prof. Paul M. Shiundu, oversees the academic functions of the University and related support areas. The portfolios in this division includes: Management of Academic Programmes, Library and Learning Resource Services, School of Graduate and Advanced Studies, Research and Knowledge Exchange, Centre for Open and Lifelong Education and Student Support Services.

The Academics' portfolio is the principal area of strategic focus of any university and is responsible for the management of teaching and learning programmes of the institution. The management of academic programmes constitutes: student recruitment and admission services; academic programmes; examination and certification; academic secretariat and registry; academic

quality management; and scholarship, prizes and endowment. The Directorate of Library and Learning Resource Services plays a very crucial role in the educational process of TU-K. It is the heart of TU-K and actively performs the activities related to learning and teaching, research and generation of new knowledge, dissemination of research results and conservation of knowledge and ideas. The School of Graduate and Advanced Studies is responsible for the coordination and management of postgraduate studies and advanced study programmes. The Centre for Open and Lifelong Education promotes open and lifelong education. Its sole mission is to give opportunity to those qualified for university education but cannot be enrolled in the conventional residential and face-to-face delivery mode to access tertiary education and also to offer opportunity for professional development and lifelong learning to various groups of people at their convenient time, pace and place.

Under the Research portfolio, the division is responsible for providing strategic direction, leadership and management of research and knowledge exchange as well as various innovation and commercialization functions. This role would drive the University's research performance and innovation in areas of strength and priority and build relationships with industry and business through local, national and international research networks to leverage research outcomes and opportunities.

The Division for Student Affairs provides focused programmes and services that support student success and enhance the collegiate experience. The division concerns itself with the student social welfare; student accommodation services; catering services; sports and recreation; student career development; and the chaplaincy. The student social welfare services continue to constitute an important part of the management of the student affairs in the University.

TECHNOLOGY, INNOVATION AND PARTNERSHIPS



Prof. Suki K. K. Mwendwa
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The Technology, Innovation and Partnership (TIP) Division headed by the Deputy Vice Chancellor, TIP, Prof. Suki Mwendwa, includes six (6) Directorates, namely-

1. University-Industry Partnerships
2. TVET Programmes and Partnerships
3. Global and Community Engagement
4. Institutional Advancement and Development
5. Enterprise Services and Consulting
6. Innovation and Technology Park

Through the activities of the Directorates, TIP supports the main business of the University by employing strategies to enhance staff capacity, student attachments and internships, exposure to industry, and establishing strategic partnerships which result in providing resources for teaching and training, such as facilities and specialized equipment, or capacity building. All linkages and partnerships are strategic to enhance the



Mr. Peter Mberia, an Electrical and Electronic Engineering student received global accolades with his self transforming vehicle innovation.

University's local and global outlook. Partnerships with industry provide the possibility of industry based learning for staff, student attachment and internship, and job opportunities for TU-K students after the successful completion of their studies. Industry partnerships also provide insight to our Faculties during the development and revision of curricula by taking industry requirements into consideration.

TIP provides the structure and procedure for establishing partnerships with industry, international universities and research institutes, local communities and welfare groups. Corporate Social Responsibility (CSR) activities are undertaken by the Directorate of Global and Community Engagement. These outreach activities include the donation of science equipment, books, sanitary towels to needy schools, and training on income generating activities. The Outreach group also engages in training of teachers and local administrators in

computer packages that are relevant to their responsibilities, for example, time tabling and records management programs. Students in secondary schools are given talks on demystifying science, which makes science subjects less daunting and more attractive to both genders.

The Division coordinates and facilitates innovation activities, and supports staff and students' innovations. These innovations attract funding from our partners for further research. Examples are the development of bio-diesel from waste vegetable oil, which brought in funding for research, and a tuk-tuk donated by one of our partners, which is used to demonstrate the efficiency of the bio-diesel and also to monitor its performance over time. The Division facilitated the design and construction of TU-K off-road buggy, which attracted \$2.5M from Safaricom.

ADMINISTRATION, PLANNING AND INFRASTRUCTURE



The construction of the S-Block is ongoing. This is expected to provide additional workshop, laboratory and office space for the Faculty of Engineering Sciences and Technology.

The Office of the Deputy Vice-Chancellor, Administration, Planning and Infrastructure (API) is home to six Departments, namely: Human Resource Services; Planning and Institutional Reporting; University Campus Services; Property and Facilities Management; Supply Chain Operation; and Health and Wellness Services. This office is therefore pivotal in complementing all other University Departments in ensuring that their needs are met to be able to meet their mandate.

For instance, in facilitating quality teaching, this office, through the Human Resources Services continues to ensure that the right personnel are recruited to teach at the University as well as in support services. The Division continues to offer training opportunities to staff to ensure they remain abreast in their areas of specialization.

To support teaching and learning, this office has ensured that facilities and infrastructure are available. It is for this reason that the Department of Property and Facilities Management continues to work closely with the respective departments

in ensuring that the required learning facilities and office space are available.

With a paradigm shift in the way institutions carry out services, this office is keen on ensuring that the University's performance and service delivery is competitive. Through the Department of Planning and Institutional Reporting, we are able to ensure that all University Departments are performing to the expected standards. It is for this reason that in the 2013/2014 Performance Contracting ranking, the University recorded an improvement in its performance. To sustain the good performance, the University has put in place mechanisms of performance appraisal to ensure that it remains competitive in service delivery.

To achieve better results in the coming year, the Department is in its top gear to ensure that systems and procedures are standardized across the board for continual improvement in service delivery to our customers. This we hope to achieve through ISO Certification.



Prof. Joseph Kiplang'at
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A clean, safe and conducive working and learning environment is mandatory for any institution to succeed. It is for this reason that the Department of University Campus Services works round the clock to ensure that this is achieved.

A healthy community is important for the institution. It is for this reason that the Health and Wellness Services Department continues to offer prompt and quality services to our clients. The Department recently recruited additional staff to support the growing population of the University for both staff and students, we have also improved the laboratory services and a wide range of tests can be carried out at the health facility.

The University purchased an additional bus to enhance transport services to students.

The future of the Division is bright and will make a significant contribution towards the realisation of the University's Vision "To be a top rated University of Technology".

STUDENT RECREATION, WELFARE AND SUPPORT

What We Do

The Director, Student Support Services' office facilitates the integration of the academic experience of students in all aspects of university and student life. That is promoting a university climate which supports students' personal, professional development and academic success.

The Director's office handles Counselling, Accommodation, Catering, Sports, Health, Chaplaincy and limited Students' Bursaries. The office also coordinates students' union matters and other services that enhance students' emotional or personal support and growth.

The Director, Student Support Services office has a long culture of providing support and advocacy on behalf of students. The Dean of Students (Director Student Support Services) offices are located on the fourth floor of the main Administration block.

Our Vision

To cultivate, improve and sustain the development of the mind, body and personality of students to enable them position The Technical University of Kenya as a top rated University of Technology.

Our Mission Statement

To create a caring environment for students, their families, faculties and staff by planning and providing services to improve students' academic and personal welfare to improve their innovations

Our Motto

A friend to the student by promoting a culture of support and advocacy for realization of training for the real world

Our Mandate

To uphold a cordial working and personal relationship among members of the Technical University of Kenya based on truth, mutual respect, trust, and cooperation that will facilitate moulding of experts acceptable to the industry



Rev. Fr. Dr. Ndikaru wa Teresia

*Director, Student Welfare Services/
Catholic Chaplain*

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DIRECTORATE OF STUDENT SUPPORT SERVICES

Religious and Spiritual Wellbeing

Our Chaplaincy is staffed with spiritual leaders: Protestant, Catholic and Muslim. The chaplaincy services are open to the entire University community. These services and activities include: guidance, conducting worship services and coordinating spiritual activities at the university. The chaplains also teach, conduct and coordinate religious activities for students through the Young Catholics Association (YCS), Christian Union (CU), the Muslim Students Association and the Seventh Day Adventists (SDA).

PROTESTANT CHAPLAIN

The Protestant Chaplaincy of the Technical University of Kenya caters for spiritual welfare and wellbeing for both students and staff. It provides guidance and counselling in the following areas:

- Counselling
- Guidance
- Religious and spiritual growth
- Saturday and Sunday worship
- Trainings



Rev. Chalton Ochola

Protestant Chaplain

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Sh. Mohamud Jama Ali

Muslim Imam

muslimimam@tukenya.ac.ke

THE MUSLIM IMAM

The Office of the Imam caters for students, staff and their immediate family members. The office offers following services:

- Counselling services
- Spiritual and religious services
- Islamic *Da'awah* activities and outreach both within and outside the campus
- Guidance to Muslim Students Association



medical services, namely; internal and external consultation, laboratory, pharmacy supplies, medical records, nursing, external referrals, and medical examination and certification. This section also manages inpatient services including hospital admission services, hospital care management, medical emergencies, and ambulance services. Related issues under this department are management of the impact of academics on student health: sick off, deferment of study on medical grounds and health insurance during industry-based learning attachment.

GENERAL WELFARE

Catering and Accommodation

The University provides limited but modern kitchen facilities for students and the faculty members both at the University and at the male and female hostels.

Counselling Services

Confidential counselling is available to students if they are distressed or confused about any aspect of their life. Counsellors are based in the counselling centre and also offer a regular service at other main sites across the University.

Security

There is a Director, Security and Emergency Services, who coordinates the security team and collaborates with the relevant local authorities. The security officer also handles police cases involving students in session.

Clubs, Associations and Societies

The Technical University of Kenya has clubs and associations that are academic, professional and faith based in nature. The clubs and associations empower students through academic and other forums and are funded by SATU-K. T

Student Association of the Technical University of Kenya, Association of Engineering Students, Association of Business Students, Innovators Club, ICT Club, Christian Union, TU-K Science and Technology Association, TU-K Journalism Students Association, IYF, Rotaract Club, Diplomacy Club, Redcross

Students Leadership Affairs

The Student Association of Technical University of Kenya is the legal body given the mandate to represent student matters under the Student Constitution which is in line with the University Statutes and the University Act of 2012. It is also referred to as the student council.

Supervision of SATUK Elections and Power Transition: The Students' Union is a democratic organisation run by students for students. Each year a committee of students is elected by the students, to run the Union. The student body is guided by the student constitution and seeks to cultivate a culture of democracy and good governance in our country Kenya. The Director's office facilitated free and fair elections every October when the term of the office bearers ends.

Encouraging Female Students' Participation in Student Leadership: In the run up to the SATU-K elections held on 9th October, 2014 female students were encouraged to contest for elective posts. Candidates vying for the school representative posts are expected to have a running mate of the opposite sex. For the first time in TU-K, out of the forty two (42) union leaders, seventeen (17) are elected female students.

Strengthening Leadership of Students' Organizations: The Director's office organizes seminars, workshops, study tours and other educative events to empower student leaders to gain more integrity and performance in accordance with the university rules and regulations.

ICT SERVICES

The Directorate of ICT Services is responsible for the overall planning, organisation and execution of ICT functions for the University. Several projects and activities have been initiated and accomplished at the University to ensure that that TU-K capitalizes on the potentials that ICT offers in a technical university.

Management of the Converged ICT Infrastructure: This is a continuous venture for TU-K. It involves designing, installation, securing and managing scalable converged ICT infrastructure that effectively supports TU-K academic and administrative functions through timely transmission of voice, data and video. It ensures that data flows efficiently, machines run reliably and information is stored securely.

The Installations (both wired and wireless) are continuously upgraded as the demand arises. The University, in conjunction with other partners, plans to increase the wireless coverage from the current 30% to almost 90% by March 2015.

Management Information Systems: TU-K has embraced automation in most of its operations. The directorate, working with other divisions in the University, is providing the support required for a flexible means for students to access information, efficient means of communications



between various divisions within the University, convenient way for staff to access reliable information for faster decision making and reduce on paper use and other resources by maximizing the utilization of ICTs.

Several systems have been acquired and deployed. These include the Library MIS, the University Digital Repository and the Finance

MIS. Several modules have been developed and deployed and more are still coming. The completed modules include; User Management, Student Recruitment, Student Admission and Registration, Students Portal and Staff Medical Claims. The ongoing modules include; Student Finance, Hostels and Accommodation, University Security, Student Examinations, Online Banking Integration, Human Resource Management and FTSE Management.

The University is also committed to the provision of ICT tools to facilitate access to information by both students and staff. This is being done

through acquisition of personal computers (PCs,) utilization of Virtualized desktops and offering of incentives for Bring Your Own Device (BYOD) initiatives.

Internet: Fast and reliable Internet service is available to staff and students of the TU-K. This enables TU-K to accomplish its mandate of education, research and training.

Learning Technologies: Effective use of ICT is a key driver for TU-K's academic performance. The University is developing e-content delivery modalities to match individual learning styles

e.g. deployment of e-Learning platforms, lecture capture systems and video-conferencing systems etc. To this end, a learning platform has been configured and is ready for use. Two video-conferencing facilities have been acquired and installed.

Web Services: The University is utilizing the latest web technologies and internet standards to ensure that it is able to reach a wide audience while at the same time providing flexible methods of access to the available ICT resources in the University.



BURSARIES AND SCHOLARSHIPS

Ninety percent (90%) of our students enrolled for degree programmes rely on HELB and bursaries. Diploma and certificate students also rely on sponsorship through TIVET. Other organisations like Toyota Kenya and Rattansi Trust have also been giving scholarships to TU-K students. This year, the Students Union (SATU-K) has allocated Kshs. 1.5 million for bursary to students. The management pledged to double SATU-K's contribution to assist needy students.

SPORTS

There are extensive opportunities for sport and recreation, supported by a team of staff who provide activities to suit all ability levels. We have sports facilities for soccer, basketball, hockey, rugby and athletics. We participate in tournaments and leagues throughout the year and ensure that the students get the right skills and attitudes through sports. Our teams participate in sports championships, competitions, tournaments and leagues at national, regional and international levels. The University teams have won numerous championships, trophies and achievement awards.

THE TECHNICAL UNIVERSITY OF KENYA LIBRARY

The Technical University of Kenya Library promotes intellectual growth and creativity by facilitating effective access to information in support of the technological training, research and learning needs of the Technical University of Kenya Community. It has a wide range of resources both in print and in electronic form. We have both the E-books and E-journals that can be accessed to enhance research among the users within the University.

To enable the students utilise these resources, we have a comprehensive information literacy programme. This programme enables the students to recognise the need for information and the ability to locate, evaluate and use it

effectively. From our interaction with students, we have observed that those who take keen interest in Information literacy, become competent, independent learners and easily manage technology tools to access information and to communicate.

The Library is divided into sections as follows:

Circulation Section: This section offers all circulation services to users of the library. Users are able to renew and reserve books online through the library website.

Information Desk: The section serves staff and students, and any other researchers allowed use of the library.

Services offered include, among other things: Registration of all library members; Registration of users to the American Resource centre online

library and e-library USA; and Issuance of the American Resource centre rotational collection.

Special Collection Section: This section stocks a variety of important information materials, including projects, thesis, rare materials, development plans, standards, Government/legal documents (e.g. Laws of Kenya), policy documents among others, because of the uniqueness of these documents, the section is on closed access and users must request for information resources over the counter.

Technical Section: This section processes all the acquired library information materials:

Lending Services: The Library allows its users to borrow information resources for a specific duration dictated by the user group.

Renewals: All information materials borrowed

from the library may be renewed for a further period dependent on the user category, provided they have not been reserved by another user.

Reservations: Users may reserve information materials via the OPACS or anywhere even outside campus as long as they can access the library catalogue.

Social networking: The University Library encourages the use of social networking platforms for easy feedback.

American Embassy Library

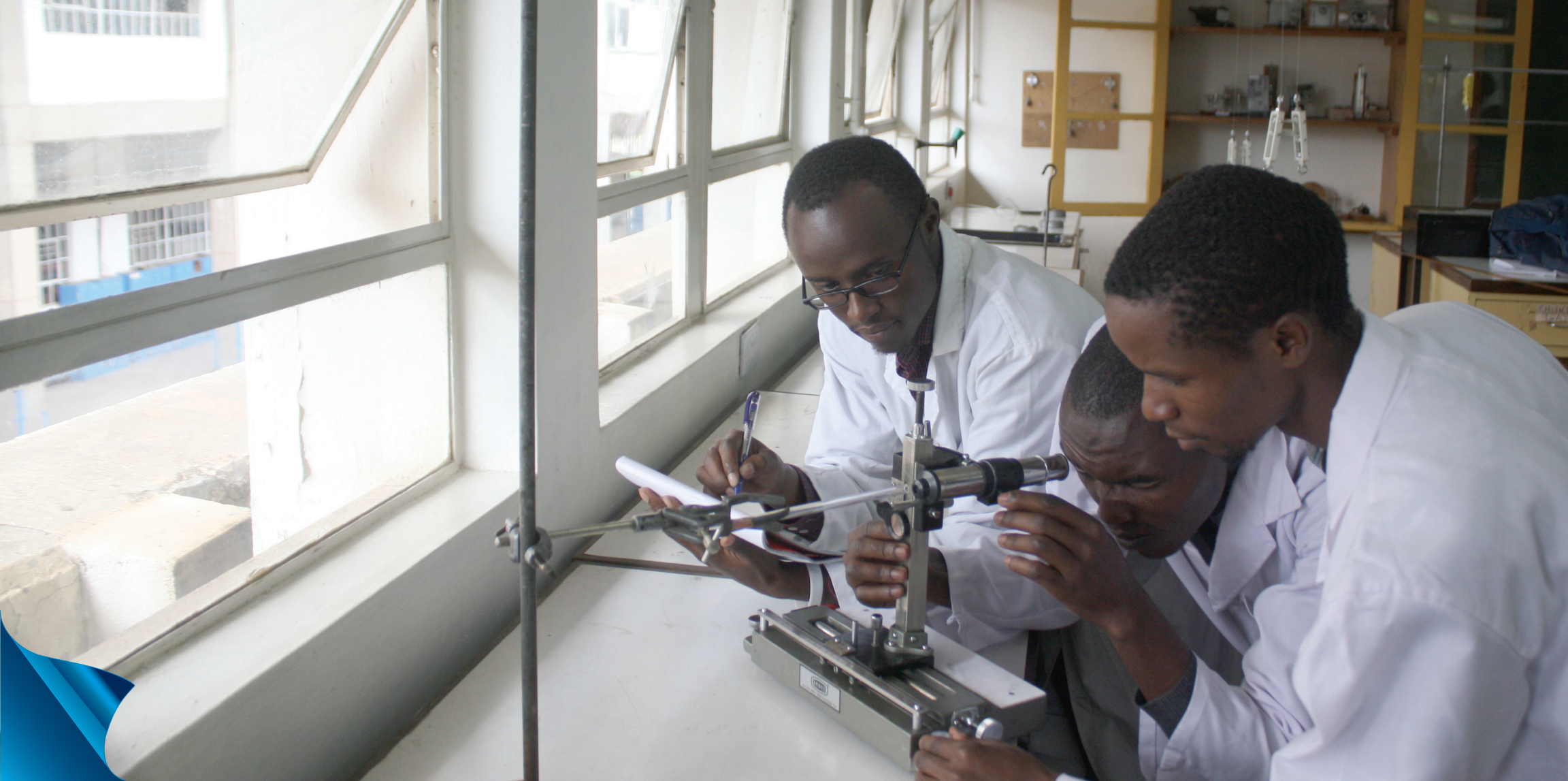
The Library has partnered with the American Embassy Library where all members of The Technical University of Kenya Library may register and access the Embassy Library as well as their digital library. Forms for registration are available at the University Library information desk.

RESEARCH AFRICA

TU-K library through research Africa is enabling its users' access grants for their own researches as well as knowledge to write proposals that can be accepted by the grant facilitators. Few of the individuals have already benefited from the same with more beginning to send their proposals.

E-RESOURCES

TU-K Library organises an e-resources week annually to create awareness about the available scholarly information not held locally. Those who conduct these trainings are students who have been trained to be knowledge ambassadors.



PROF. MICHAEL L. MUIA

Executive Dean | *Faculty of Applied Sciences and Technology*

**PROFESSOR OF NUCLEAR PHYSICS – DEPARTMENT OF
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IN THE FACULTY:

School of Biological and Life Sciences

School of Information and Communication Technologies

School of Health Sciences and Technology

School of Mathematics and Actuarial Science

School of Physical Sciences and Technology

Centre for Science and Technology Studies

16 FACULTY OF APPLIED SCIENCES AND TECHNOLOGY

OUR rich menu of courses enable learners to specialize in the areas that interest them most. The Faculty of Applied and Sciences and Technology is well positioned to teach its own programs, and to provide specialist services to the other Faculties that apply concepts and theories of science.

As the reference point in scientific knowledge, the Faculty endeavors to enthuse students with the versatility of science and its application in the real world. We, therefore, simplify the teaching of science by utilizing activity

based learning, experimentation and exploration to enhance the use of knowledge in technology development. Industry based learning rounds up this process of training to provide strong grounding in practical “education for the real world.”

We have invested in the state-of-the art laboratories to facilitate achievement of our broader goal—of fostering ties between science and other disciplines, and preparing the minds of scholars by providing a platform from which they can fuse different fields of inquiry to create new knowledge and incubate innovation.

Dorothy, *Quality and Customer Service Manager*

I am the Quality and Customer Service Manager at the Associated Battery Manufacturers, the manufacturers of Chloride Exide.

At the inception of the Certificate in Analytical Chemistry at The Kenya Polytechnic, I was one of the pioneer students in the same. I would later join the Diploma in Analytical Chemistry at the same institution, and my studies ran concurrently with my employment at ABM.

I joined the Chloride Exide team as a Laboratory Technician, and thanks to my continued academic progression at The Kenya Polytechnic, rose through the ranks to become the Quality and Customer Service Manager, a position I hold to date. I have since pursued the Higher National Diploma, and most recently, Bachelor of Philosophy in Applied

Chemistry, graduating in December 2012.

I currently manage a technical team of seventeen personnel, seven of whom are also graduates of The Kenya Polytechnic (now The Technical University of Kenya).

Throughout my 24-year career with ABM, I have discovered that The Technical University of Kenya has an edge over other institutions when it comes to technical skills acquisition, and I dare say that if I had enrolled in any other college, I wouldn't have achieved as much. Apart from technical, I also pride in managerial, research, communication and interpersonal skills, made in The Technical University of Kenya.

The Technical University has a reputation of paying

attention to industry needs. Their curricula are drafted in close consultations with industry players to ensure that their graduates remain relevant and applicable in the job market. I therefore, urge prospective students to consider joining The Technical University of Kenya. I would also like to encourage continuing and prospective students to stay focused and result-oriented and avoid taking shortcuts, as these shortcuts are known to compromise quality standards in all aspects of life.

I am married with children, and through my experiences at TU-K, I have learnt to juggle amongst work, academic progression and family life.

Dorothy Omamo



- DEPARTMENT OF APPLIED AND TECHNICAL BIOLOGY
- DEPARTMENT OF BIOCHEMISTRY AND BIOTECHNOLOGY
- DEPARTMENT OF ECOLOGY AND CONSERVATION BIOLOGY
- DEPARTMENT OF FOOD SCIENCE AND TECHNOLOGY

SCHOOL OF BIOLOGICAL
AND LIFE SCIENCES



Science is the study of improvement of human life. For the sake of academics, research and development, we take scientific applications seriously. This enables us to come up with practical solutions.

Director: PROF. DORCAS YOLE | *Professor – Department of Applied and Technical Biology*
director.sbls@tukenya.ac.ke

In the face of the diversity and breadth of biological sciences, The School of Biological and Life Sciences at the Technical University of Kenya creates an opportunity for new specializations to enhance capacity building, collaborations and maximization in utilization of resources, both physical and human. The Department of Applied and Technical Biology focuses on the training in biology and its applications, such as industrial, agricultural, medical, research and forestry, while departments of Biochemistry and Biotechnology explores bio-molecules isolation, analysis and use. The Department of Ecology and Conservation Biology focuses on the sustainable use of natural resources, while the Department of Food Science and Technology's main focus is largely on application of biological sciences, in this respect borrowing heavily from biology and chemistry to improve the quality of human life.

Department of Applied and Technical Biology

Biology teaches the fundamentals of life and provides the crucial link to other disciplines, whether industrial, health, social, or economic. Biology is an essential component of the curricula for most of the technological subject areas that TU-K offers.



PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Bachelor of Technology in Applied Biology (Industrial & Bio-production • Biological Laboratory options)	• C+ mean grade, and a C in mathematics, Biology, and chemistry, or a TU-K Diploma in Technology in Applied Biology	8 semesters
Bachelor of Technology in Science Laboratory Technology (Biological, Chemical or Physical option)	• C+ mean grade, and C+ in Biology, physics, and chemistry, or a TU-K Diploma in technology in Applied Biology or Dip. Tech in SLT.	8 semesters
Bachelor of Philosophy in Technology (Applied Biology) [Evening] or [Vacation/E-LEARNING]	• Higher National Diploma	4 semesters
Diploma in technology in Applied Biology (Evening or Vacation/ Online)	• KCSE C- (Minus) with C- in cluster subjects	6 semesters (evening)
Diploma in technology in Science Laboratory Technology (Industrial option & Biological option) – Vacation or Evening	• KCSE C- (Minus) with C- in cluster subjects	6 semesters (evening)
Diploma in technology in: Industrial and Applied Biology • Biotechnology	• KCSE C- (Minus) with C- in cluster subjects	6 semesters (evening)
Certificate in Science Laboratory Technology (SLT) Evening	• KCSE D+ (Plus) , those working in various ministries & NGO's on environmental related matters	2 semesters (evening)
Intake: September every year		

CAREER OPPORTUNITIES ▼

Biology has many branches of the life sciences including botany, ecology, forestry, genetics, immunology, marine biology, pharmacology, and zoology. Pursuing a career in biology therefore can be exciting and rewarding. Biologists have careers in pharmaceutical, biotechnology, or applied and medical research. Our graduates find employment as research officers, teachers, lecturers, and laboratory managers in both governmental and non-governmental organisations.

Department of Biochemistry and Biotechnology

Biochemistry is the chemistry of living organisms. It embodies a fundamental approach to chemistry of life and conveys the strongly unifying contribution of molecular biology to other scientific disciplines. Biotechnology is the use of living organisms to create goods and services. In light of this, the two disciplines are well anchored and taught at TU-K.

PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Bachelor of Technology in Biotechnology: (Industrial, Medical, and Agricultural Options)	• C+ mean grade, and a C in Mathematics, Biology, and Chemistry, or a TU-K Diploma in Technology in Biotechnology	6 semesters
Bachelor of Philosophy in Biotechnology: (Industrial, Medical, and Agricultural Options)	• Higher Diploma in Biotechnology	2 semesters
Bachelor of Science in Biochemistry: (Industrial, Medical, and Nutrition options)	• Diploma in Biochemistry	6 semesters
Diploma in Technology (Biotechnology)	• KCSE C- (Minus) with C- in cluster subjects	6 semesters (evening)
Diploma in Technology (Biochemistry)	• KCSE C- (Minus) with C- in cluster subjects	6 semesters (evening)
Intake: September every year		

CAREER OPPORTUNITIES ▼

Our graduates find employment as research officers, technologists or technicians in research institutions such as the International Livestock Research Institute (ILRI), Kenya Agricultural Research Institute (KARI), Kenya Medical Research Institute (KEMRI), International Centre for Insect Physiology and Ecology (ICIPE), Kenya Trypanosomiasis Research Institute (KETRI), Institute of Primate Research (IPR), Kenya Forest Research Institute (KEFRI), National Environmental Management Authority (NEMA); employment in bio-manufacturing / bio-processing industries and biotechnology-service providing sectors including: medical, industrial, agricultural, environmental, food, bioinformatics and forensic Science. In addition graduates can advance their training to Masters and PhD levels and become academicians in the institutions of higher learning.

Department of Ecology and Conservation Biology

Conservation biology involves the study of nature and status of earth’s biodiversity. It aims at protecting species, their habitat and ecosystems from extinction and erosion of biotic interaction; and propagation and rehabilitation of the same. Ecology studies relationships between living things and their physical environment. The Department of Ecology and Conservation Biology focuses on training and research in management of ecological systems, conservation of biodiversity, genetic resources, and wildlife management; fields which are particularly important to Kenya as a nation. The curricula equips graduates with skills in conservation, preservation, rehabilitation, mapping, management and monitoring natural resources and their sustainable use.

PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS:	DURATION
Bachelor of Technology in Environmental Biology	• KCSE C+ with at least C+ in Mathematics, Geography, Chemistry and Biology, or TU-K Diploma in Technology in Environmental Resource Management	8 semesters
Bachelor of Technology in Ecology and Biodiversity Conservation		8 semesters
Bachelor of Technology in Wildlife Management and Conservation	• KCSE mean grade C+ (plus) With C+ in cluster subjects.	6 semesters (evening)
Diploma of Technology: Environmental Biology		6 semesters (evening)
Diploma of Technology: Ecology and Biodiversity Conservation	• KCSE mean grade C+ (plus) With C+ in cluster subjects.	6 semesters (evening)
Diploma of Technology: Wildlife Management and Conservation	• KCSE mean grade C+ (plus) With C+ in cluster subjects.	8 semesters
Certificate in Environmental Biology	• KCSE D+ (Plus) , those working in various ministries & NGO's on environmental related matters	2 semesters (evening)
Certificate in Ecology and Biodiversity Conservation	• KCSE D+ (Plus) , those working in various ministries & NGO's on environmental related matters	2 semesters (evening)
Certificate in Wildlife Management and Conservation	• KCSE D+ (Plus) , those working in various ministries & NGO's on environmental related matters	2 semesters (evening)
Intake: September every year		

CAREER OPPORTUNITIES ▼

Our graduates find employment as research officers, lecturers, environment officers, technologists and technicians in research institutes and environmental agencies such as Kenya Agricultural Research Institute, Universities, National Environmental Management Authority, Kenya Wildlife Service, Kenya Forestry Research Institute, Ministry of Water, Ministry of Environment and Mineral resources, United Nations Environment Programme, County governments, National Museums of Kenya, and International Centre for Insect Physiology and Ecology among many others.

Department of Food Science and Technology

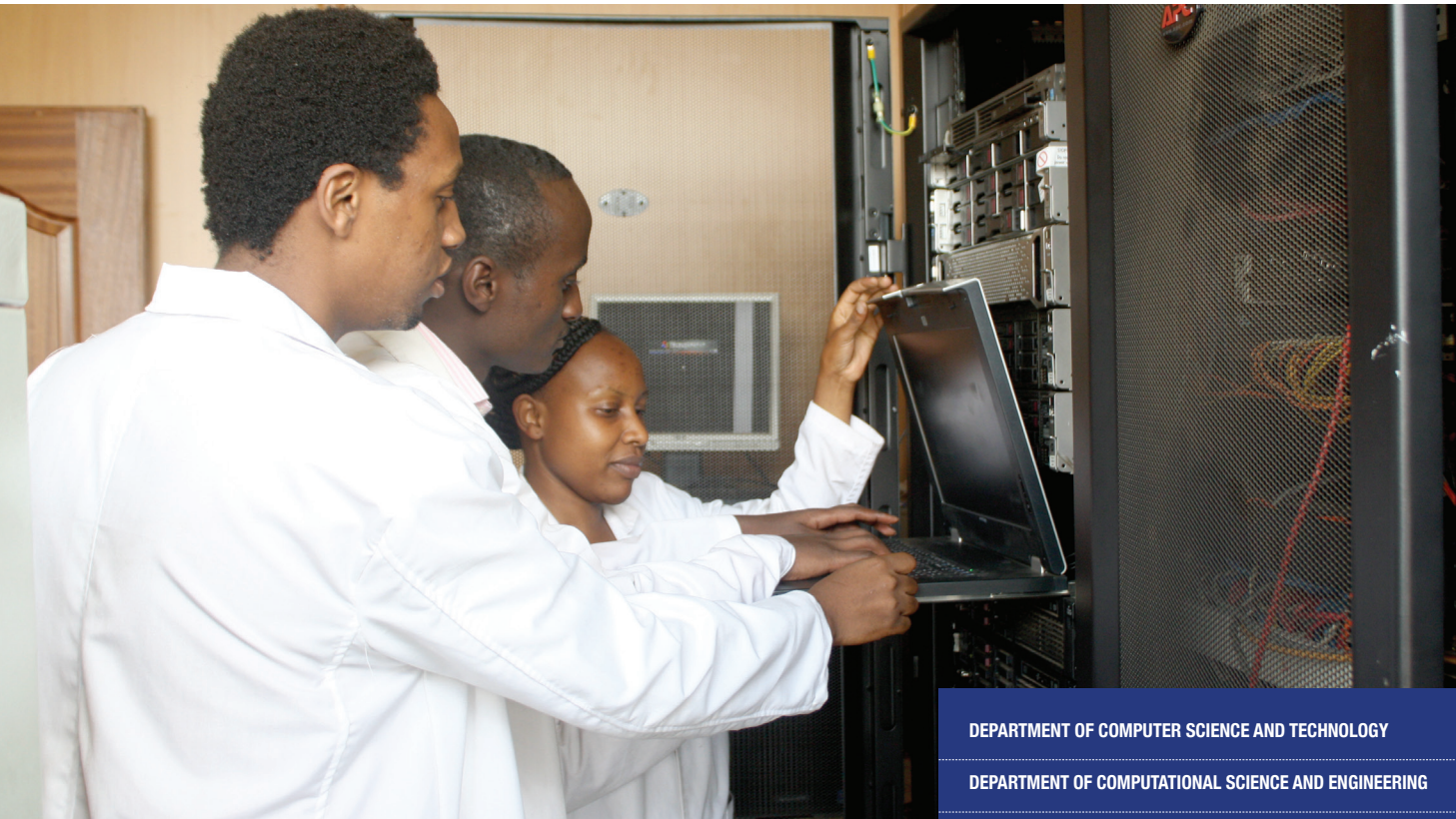
Food Science and Technology is a specialized application of biological sciences, and borrows heavily from biology, chemistry and biochemistry. It gives a crucial link between food, nutrition and health. Food professionals develop technological innovative applications in biotechnology for development and processing of foods. The department trains technicians, technologists and technical managers in the food industry.



PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS:	DURATION
Bachelor of Philosophy in Food Science and Technology	• Higher National Diploma in Technology (Food Science and Technology)	4 semesters
Bachelor of Technology in Food Science and Technology	• C + Mean grade (in addition, C+ in Mathematics, Physics and Chemistry, or TU-K Diploma in Technology (Food Science and Technology)	8 semesters
Diploma in Technology in Food Science and Technology	• KCSE mean grade C- (Minus) With C- in cluster subjects.	6 semesters (evening)
Certificate of Technology Food Science and Technology	• KCSE D+ (Plus), those working in various ministries & NGO's on environmental related matters	2 semesters (evening)
Intake: September every year		

CAREER OPPORTUNITIES ▼

The multidisciplinary nature of the programmes offered in the department prepares our graduates for employment opportunities in food and allied industries as technicians, technologists, supervisors, lecturers and researchers in educational and research institutions. Also, in sales and executive positions in food and food-related industries. They can also be agribusiness entrepreneurs. Food Science and Technology graduates can advance careers in health-related careers.



- DEPARTMENT OF COMPUTER SCIENCE AND TECHNOLOGY
- DEPARTMENT OF COMPUTATIONAL SCIENCE AND ENGINEERING
- DEPARTMENT OF INFORMATION SYSTEMS AND TECHNOLOGY

SCHOOL OF COMPUTING AND INFORMATION TECHNOLOGIES



Computing is concerned with practical techniques of programming computers to solve real and complex problems facing our society today. It has transformed society into a virtual world.

Director: PROF. PATRICK J. OGAO | Associate Professor – Department of Information Systems and Technology
director.scit@tukenya.ac.ke

THE competitiveness of any organisation or economy depends heavily upon its capacity to adapt to technological evolution. Today Computing and Information Technologies have literally become a language of instruction in any academic institution. The school is famous for its strengths in computing theories and practicals, which means that students are taught how to think around the fundamentals of computing techniques, and not just how to programme. With the rapid pace of change in this field, specific skills become obsolete, but with proper grounding in theoretical functions one remains relevant despite the dynamic technology.

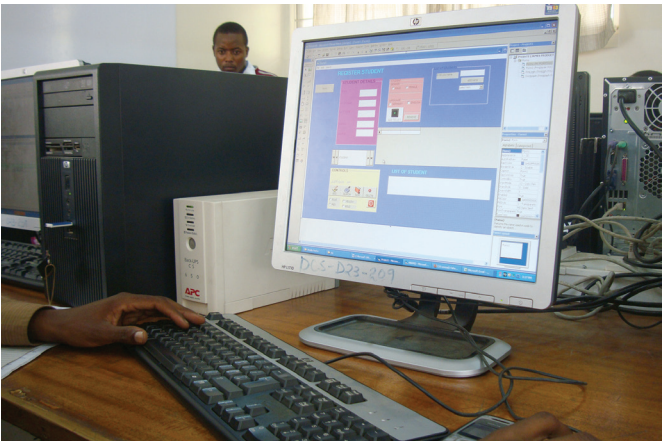


Department of Computer Science and Technology

Computer science is considered as the sub-discipline in the wider area of computing and informatics. It is concerned with understanding, designing, implementing and using computing systems, ranging in complexity from software development, hardware systems and communications networks as vast as the World Wide Web. The department approaches computer science from the core concepts of computing which have their roots in mathematics and logic e.g. what it means to compute, and what problems can or cannot be computed.

The department endeavours to translate the science in computing into the applicable technology in providing solution to the problems experienced in the real world day-to-day work environment.

PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Bachelor of Technology in Computer Technology	- Diploma (TEP), TU-K Diploma or Equivalent or - KCSE C+ (plus) with at least C+ in Eng, Maths and Physics	8 Semesters for KCSE holders, 3 Industrial attachments, Semesters for Diploma holders
Bachelor of Technology in Communication and Computer Networks	- KCSE C+(plus) with at least C+ in Eng, Maths and Physics or - Diploma (TEP), TU-K Diploma or Equivalent	8 Semesters for KCSE holders, 3 Industrial attachments, Semesters for Diploma holders
Diploma in Technology in Computer Technology	KSCE C- (Minus) with at least C- in Eng, Maths and Physics or certificate in computer technology	6 semesters (evening)



PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Diploma in Technology in Communication and Computer Networks	KSCE C- (Minus) with at least C- in Eng, Maths and Physics or certificate in computer technology	6 semesters (evening)
Advanced Certificate in Computer Hardware, Software and Network Support Technology	KCSE D+ (Plus) with at least a D- in Maths/Physics	2 semesters (evening)
Certificate in Computer Technology	KCSE D+(Plus) with at least a D- in Maths/Physics	2 semesters
Certificate in Computer Hardware, Software and Network Support Technology	KCSE D+(Plus) with at least a D- in Maths/Physics	2 semesters
Advanced Certificate in Software Development	KCSE D+(Plus) with at least a D- in Maths/Physics	2 semesters (evening)
Intake: September every year		

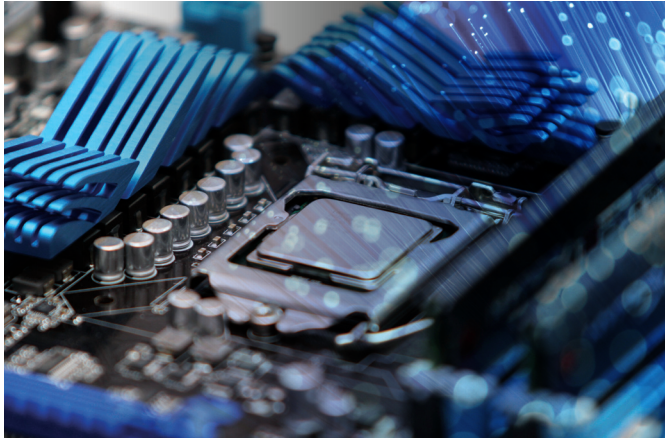
CAREER PROSPECTS ▼

The vast majority of our graduates make direct vocational use of their degree in the IT industry. Increasingly, they find work in any trade, industry or profession that is heavily reliant on computing systems, including media, communications, finance, energy and medicine.



Department of Computational Science and Engineering

Computational science and engineering is a modern and fast growing field used in the application of computer techniques in the solution of engineering and scientific problems. It integrates the disciplines of computer science, mathematics, engineering and science. Computational science and engineering is seen as an alternative approach to carry out large scale engineering and scientific experimentation through the use of techniques such as simulation and optimisation.



Department of Information Systems and Technology

The department focuses on programmes emphasizing on the application end of Information Technology. The Department offers programmes in information systems and information technology with emphasis on application, in which case the programming language is used to design databases, web pages and management information systems. The study areas in this department also cover computer networking and communication systems.

PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Bachelor of Technology in Information Technology	- Diploma (TEP) , TU-K Diploma or Equivalent - KCSE C+(plus) with at least C+ in Eng, Maths / Physics	8 Semesters for KCSE holders, 3 Industrial attachments, 5 Semesters for Diploma holders
Diploma in Technology in Information Technology	KSCE C-(Minus) with at least C- in Eng, Maths and Physics or certificate in computer technology	6 semesters (evening)
Certificate in Information Technology	KCSE D+(Plus) with at least a D- in Maths/Physics	2 semesters
Intake: September every year		

CAREER PROSPECTS

Our graduates become confident users and managers of information technologies. They also administer and manage networks or database systems and develop new software solutions to meet specific market or organisational needs.



- DEPARTMENT OF BIOMEDICAL SCIENCES AND TECHNOLOGY
- DEPARTMENT OF COMMUNITY AND PUBLIC HEALTH
- DEPARTMENT OF HUMAN NUTRITION AND DIETETICS
- DEPARTMENT OF PHARMACEUTICAL SCIENCES AND TECHNOLOGY

SCHOOL OF HEALTH SCIENCES AND TECHNOLOGY



In view of changing lifestyles and an ever-increasingly ageing society, sustaining and improving health through technological research and conviction has taken a pivotal role.

Director: **PROF. FIONA MBAI** | Professor – Department of Biomedical Sciences and Technology
director.shst@tukenya.ac.ke

THE School offers programmes in Biomedical, Community and Public Health, Human Nutrition and Pharmaceutical Sciences. The programs are designed to produce graduates in the Health Sciences and Technology who will have the necessary skills to seamlessly adapt to the workforce of this highly technical and specialized field of the allied health sciences. The goal of the School is to train competent health service delivery professionals with necessary skills and attitudes for health promotion, service delivery and innovations in the respective program specialties.

Department of Biomedical Sciences and Technology

Biomedical Laboratory Sciences programmes provide advanced technological knowledge in combination with methodological and medical knowledge. Biomedical laboratory Scientists are health science professionals whose central function is the collection, preparation and analysis of patient samples for evidence based diagnosis and treatment. The department provides students with training knowledge of the principles, theories and methods and their application in the laboratory medicine. The programmes also give learners skills in health needs assessment, decision making and action, monitoring and evaluation. We train middle and high level technologists capable of working in Public and private laboratories, Research institutions, Industry and Wellness clinics.



PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS:	DURATION
B. Phil (Medical Laboratory Technology)	• Higher Diploma in Medical Laboratory Technology or equivalent	4 semesters
Bachelor of Science (Medical Laboratory Science)	• KCSE Mean Grade C+ (Plus), including C+ (Plus) in relevant subjects	8 semesters
Diploma in Medical Laboratory Science	• KCSE C- (Minus) with C- in cluster subjects	9 Terms
Intake: September every year		

CAREER OPPORTUNITIES ▼

Our graduates find careers in Hospitals, Research institutions, health centres and as entrepreneurs.

Department of Community and Public Health

The Department of Community and Public Health provides training programmes central to primary healthcare service delivery. Greater emphasis is placed on health promotion and disease prevention as a means to reduce the costs of care by improving the health of our populations. The programmes are designed to provide practical and skills based training for careers in public healthcare services and health systems management.



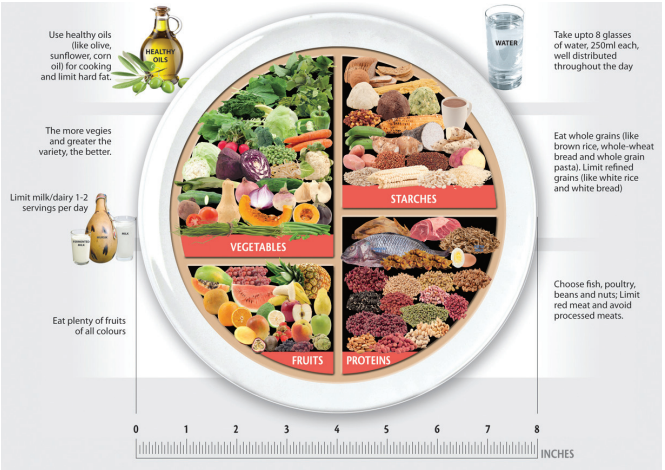
PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS:	DURATION
Bachelor of Technology in Community and Public Health	• Credit Pass in a relevant Diploma or Pass in a relevant Diploma with two years working experience	6 semesters
Bachelor of Technology in Community and Public Health	• KCSE Mean Grade C+ (Plus), including C+ (Plus) in relevant subjects	12 semesters
Diploma in Technology – Community and Public Health	• KCSE Mean C (plain), with C- in English and cluster subjects	8 semesters (Full time studies)
Diploma in Technology – Health Records and Information Technology	• KCSE C- (Minus) with C- in cluster subjects	3 years
Certificate in Health Records and Information Technology	• KCSE Mean D+ (PLUS)	1 year
Intake: September every year		

CAREER PROSPECTS ▼

Graduates of Community and Public Health, find exciting opportunities in both public and private sectors in local health departments. The jobs available at health departments range from health Inspectors to Health Educators. Other find work in university systems as researchers. Others find careers in non-profit organisations in areas such as health advocacy, policy, or research for organisations such as the Red Cross, or a local non-profit that focuses on specific health issues.

Department of Human Nutrition and Dietetics

The Department of Human Nutrition and Dietetics offers excellent training to Nutritionists and Dieticians, Dietetic Technicians and Technologists who will use science to promote healthy eating habits for both preventive and curative management of nutritional disorders. Diet therapy, nutritional research, counselling and education are all within the realm of the nutrition and dietetics profession.



PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS:	DURATION
Master of Science in Community Nutrition Master of Science in Clinical Nutrition and Dietetics	• Second Class Honours (Upper Division) from a recognised university or • Second Class honors degree (Lower division) from a recognised university and at least two years working experience or • Bachelor of Science in Nutrition and Dietetics, Biology, Public Health, Health Science, Nursing, Pharmacy, Food Science or a related discipline from an accredited national or international academic institution.	6 semesters
Bachelor of Science (Nutrition and Dietetics)	• KCSE Mean Grade C+ (Plus), including C+ (Plus) in relevant subjects	11 semesters
Bachelor of Technology (Nutrition and Dietetics)	• Credit Pass in a relevant Diploma or Pass in a relevant Diploma with two years working experience	5 semesters
Diploma in Technology (Nutrition and Dietetics)	• KCSE Mean C (plain), with C- in English and cluster subjects	8 semesters
Certificate in Nutrition and Dietetics	• KCSE Mean D+(PLUS)	3 semesters
Intake: September every year		

CAREER PROSPECTS ▼

Graduate Nutritionists, Dieticians and Dietetic technicians find careers in skilled Community based programs, Nursing facilities, Schools, Hospitals and medical centres, Public health agencies, Research Institutions, Faith based organisations and Chemists.

Nutritionists and Dieticians specialize in five main thematic areas namely, 1) Clinical Nutrition and Dietetics Practice: planning and supervision of meals prepared and served to patients to confer with physicians and other medical professionals about each patient’s nutritional needs and preferences, 2) Nutrition and Dietetics Management: plan, coordinate and supervise the planning, purchase and preparation of food for institutions like hospitals, health centres and schools. 3) Nutrition and Dietetics Research: study nutrition, food science and research on alternative foods as they relate to human health outcomes. 4) Community Nutrition and Dietetics: work in government Health centres to provide advice to the community on optimal nutrition practices and improve eating behaviour. 5) Consultancy in nutrition and dietetics: counsel patients and perform nutritional screening and assessments on their own patients or those referred by physician. Additionally consultants in nutrition and dietetics support organisations involved in operational research to design, implement and evaluate their programmes.

Department of Pharmaceutical Sciences and Technology

The department produces Pharmaceutical Technologists to support provision of health services in hospitals and communities. The programme is recognised by the Pharmacy and Poisons Board, and adheres strictly to the prescribed training standards. The department aims to offer clinical Pharmacists and Pharmaceutical Technologists a dynamic foundation that allows them to serve in all sectors of the Pharmaceutical Industry including research and development. The market absorbs 100% of our graduates on completion of their studies.



PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS:	DURATION
Diploma in Pharmaceutical Technology	• C (plain) Minimum and C (plain) in Mathematics, Physics, biology, chemistry, English or Swahili	3 years
Intake September every year		

CAREER PROSPECTS ▼

Health Care, Pharmaceutical Companies, drug regulatory agencies, academia and Pharmaceutical Research institutions.

DEPARTMENT OF PURE AND APPLIED MATHEMATICS

DEPARTMENT OF INDUSTRIAL AND ENGINEERING MATHEMATICS

DEPARTMENT OF STATISTICS AND ACTUARIAL SCIENCE

SCHOOL OF MATHEMATICS AND ACTUARIAL SCIENCES



The essence of technology remains vague without a strong **mathematical support!** Indeed, mathematical support is guaranteed when you join The Technical University of Kenya.

Director: PROF. FRANCIS GATHERI | Professor – Department of Pure and Applied Mathematics
director.smas@tukenya.ac.ke

THE School of Mathematics and Actuarial Sciences currently consists of three departments namely: Department of Statistics and Actuarial Sciences, Department of Industrial and Engineering Mathematics and Department of Pure and Applied Mathematics. The school provides an opportunity to students who wish to pursue different areas of mathematics by increasing their level of competence and preparing them adequately to enable them join the job market. The School also imparts mathematical skills and positive attitudes that cultivate a culture of research and professionalism to satisfy industrial and technological demands both nationally and internationally. The School has a vision to be a centre of excellence in teaching mathematics for technological development.

Department of Pure and Applied Mathematics

Bachelor of Science in Mathematics involves using mathematics theory and logics to solve mathematics related problems. In the degree programme a student may specialize in pure or applied mathematics

The course seeks to provide an opportunity to many students who wish to pursue different areas of mathematics by increasing their level of competence and preparing them adequately to enable them join the job market e.g. banking, education sector and also to register for a postgraduate course in their area of specialization.

PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS:	DURATION
Bachelor of Science in Mathematics	KCSE mean grade of C+ with C+ in cluster subjects	8 semesters
Bridging Course in Mathematics	KCSE Mean grade of C-	1 semester
Master of Science in Mathematics (Pure or Applied Mathematics)	B.Sc. in Mathematics or statistics	4 semesters
PhD In Mathematics	By Research	6 semesters
Intake: September every year		

Department of Industrial and Engineering Mathematics

The Department of Industrial and Engineering Mathematics offers courses in Engineering Mathematics and Technical Mathematics for engineers and technologists. This is mainly a service department for engineering and technological courses. The Department is planning to roll out a Masters programme in Industrial Mathematics.

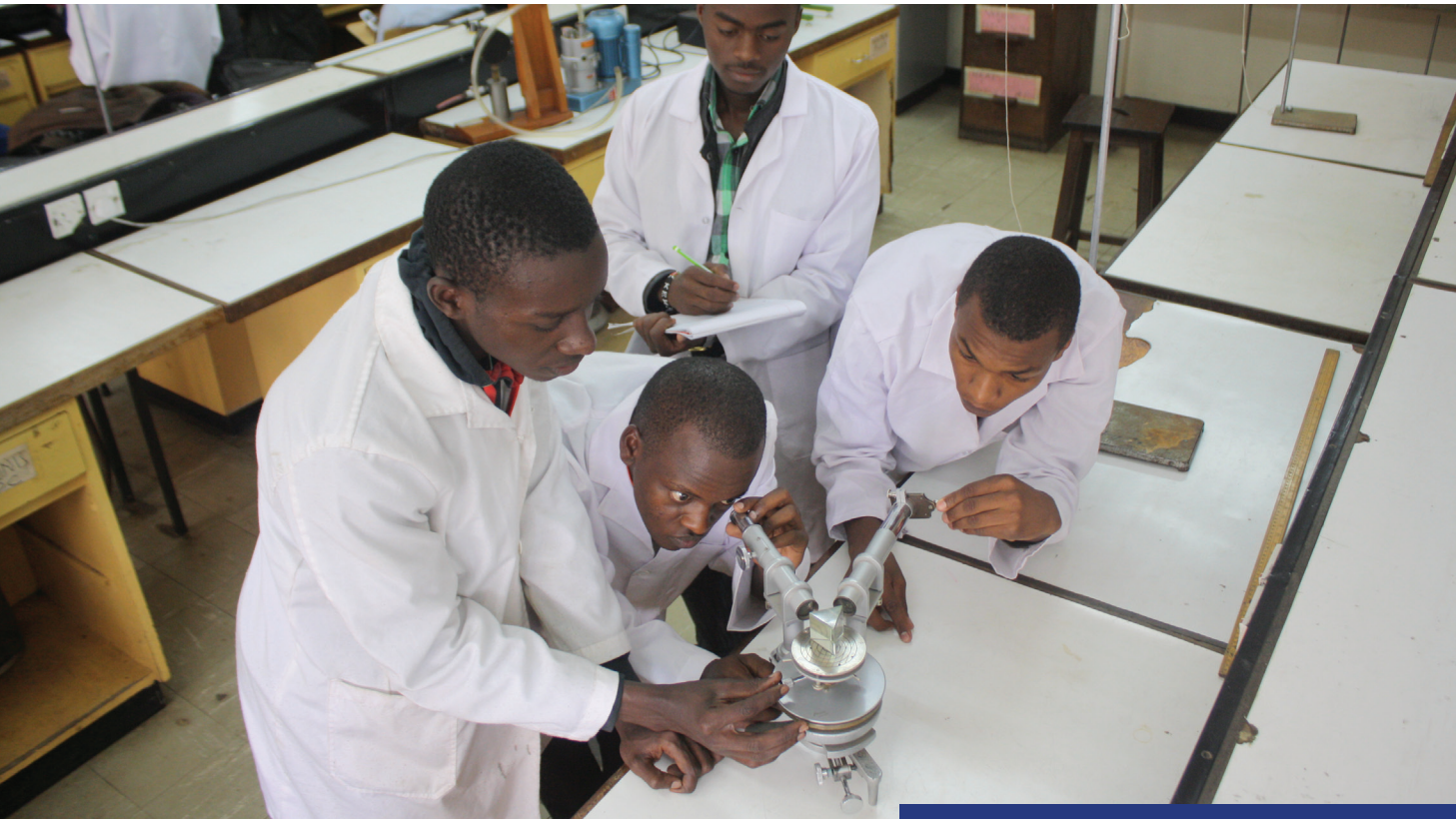
Department of Statistics and Actuarial Sciences

Bachelor of Technology in Applied Statistics is intended to produce a practical and hands-on statistician with a cutting edge computing skills. The graduates are expected to carry out research and apply statistical data analysis to problems in various sectors of the economy. These include; research institutions, education,business, industry, financial services, medicine, information technology in the public, corporate, non-governmental organisations, multinationals, multilateral United Nation bodies and small-scale consultancy businesses in statistical data analysis.. **Bachelor of Philosophy in Technology (Applied Statistics)** is designed to augment the practical skills of holders of higher diploma qualifications by imparting more mathematical and statistical skills for problem solving. Hence graduate of this program are well equipped with practical application of the mathematical and scientific principles to solve problems and provide quick solutions in the workplace.

Diploma in Technology in Applied Statistics is intended to provide a sound foundation in the principles and practice of Statistics with emphasis on Practical data collection, organisation, presentation, analysis and Interpretation

Actuarial Science is the profession concerned with the application of mathematical, statistical, probabilistic and financial theories to solve real business problems. These problems involve analysing future financial events, especially where future payments involved have certain or uncertain timings. The in **Diploma in Technology in Actuarial Science** is structured to provide practical skills as well as fundamental knowledge of application of Actuarial Science in various fields.

PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS:	DURATION
Bachelor of Technology in Applied Statistics	KCSE mean grade of C+ with C+ in cluster subjects	8 semesters
Bachelor of Philosophy in (Applied Statistics)	Higher Diploma in Applied Statistics/Actuarial Sciences	4 semesters
Diploma in Technology in Applied Statistics	KCSE mean grade of C (minus) with C (minus) in the relevant cluster subjects	2 Semesters (1 academic year)
Diploma in Technology in Actuarial Science	KCSE mean grade of C (minus) with C (minus) in the relevant cluster subjects	6 semesters
Master of Science in Statistics	B.Sc. in Statistics	4 semesters
PhD in Statistics	M.Sc. in Statistics (By Research)	6 semesters
Intake: September every year		



SCHOOL OF PHYSICAL SCIENCES AND TECHNOLOGY



At The Technical University of Kenya, we intertwine **Applied Sciences** and **Technology** to solve common problems in society. So, when you train with us, you become part of the solution...

Director: PROF. PAUL BAKI | Professor – Department of Physics and Space Science
director.spst@tukenya.ac.ke

DEPARTMENT OF CHEMICAL SCIENCE & TECHNOLOGY

DEPARTMENT OF GEOSCIENCE AND THE ENVIRONMENT

DEPARTMENT OF MATERIALS SCIENCE AND TECHNOLOGY

DEPARTMENT OF PHYSICS AND SPACE SCIENCE

THE School runs hands-on programmes at the following levels: Certificate, Diploma, Bachelors, Masters and PhD. The School is home to distinguished experts consulting for United Nations in matters of Space and Bio-security, African Union in matters of Space Policy and Commission for University Education on Quality Assurance.



Department of Chemical Science & Technology

The Department of Chemical Science and Technology offers programmes in Industrial and Analytical Chemistry. Our programmes explore the structure, characterization, properties and selection of the full range of materials used in the industry today. In addition, the programmes also examine organic, physical and environmental chemistry. We focus strongly on industrial relevance and application throughout the course.

The Department has 13 PhD holders teaching and researching on the various subject areas of Chemistry, as well as mentoring students. Our peer mentoring scheme assigns groups of continuing students to new students, whom they steer through the learning process. Facilities are available to the student for practical laboratory sessions throughout their learning period, and particularly invaluable during their final-year research project. Other than the University library, there is a well-equipped departmental library.

PROGRAMMES OFFERED	QUALIFICATION	DURATION
Bachelor of Philosophy in Analytical Chemistry	National Higher Diploma in Analytical Chemistry	2 years
Bachelor of Technology in Applied Chemistry (Industrial Option)	- KCSE mean grade C+ with C+ for cluster subjects or - Diploma in Industrial or Analytical Chemistry	4 years – Module I 3 years – Module II
Diploma in Technology in Analytical Chemistry	- KSCE C- (Minus) with at least C- in Chemistry, Maths and Physics or Biology or - A Certificate in relevant areas from recognised Institutions	6 semesters (evening)
Diploma in Technology in Analytical Chemistry	- KSCE C- with at least C- in Chemistry, Maths and Physics or Biology or - A Certificate in any relevant areas from recognised Institutions	6 semesters (evening)

PROGRAMMES OFFERED	QUALIFICATION	DURATION
Advance Diploma in Quality Control, Quality Assurance and Total Quality Management	Diploma in Science, engineering and medical related subjects	3 semesters (evening)
PhD in Chemistry (by research)	M.Sc. Chemistry	6 semesters
Intake September every year		

CAREER OPPORTUNITIES ▼

The Department produces high quality graduates in Industrial and Analytical Chemistry. Careers include research and development, management positions, and technical roles within multinationals such as Unilever, Government Chemist and Glaxo-SmithKline. Others venture into small and medium enterprises, or apply their technical and analytical skills in fields such as patent law or innovation. An Industrial and Analytical Chemistry degree also provides an ideal springboard for postgraduate studies.

Department of Geoscience and the Environment

The Department of Geography and Earth Sciences trains resource managers who study the environment in its totality, diagnose environmental resource issues and suggest sustainable mitigation measures. The training is aimed at developing an awareness of the complexities of relationships between human and environment and determining how to allocate or conserve natural resources. In this regard, the Department produces top environmentalists, environmental technologists and technicians who apply their skills innovatively to conserve the environment for sustainable development.

Areas of learning include environmental resource management, environmental science and technology, environmental planning, environmental disaster management, geological sciences, atmospheric science, environment and community development and integrated water resource management.

PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS:	DURATION
Bachelor of Technology in Environmental Resource Management	KCSE C+ and C+ in Mathematics, Geography, Biology, Chemistry/ Agriculture/Physics/Computer studies/Business Studies	8 semesters
Bachelor of Technology in Environmental Science	Diploma in relevant areas from recognised institutions	8 semesters
Diploma of Technology in Environmental Resource Management	- KSCE C- (Minus) with at least C- in English, Geography, Biology/ Agriculture, Chemistry/Physics, - Certificate in any relevant areas from recognised Institutions	6 semesters
Diploma in Geological Science	- KSCE C- (Minus) with at least C- in English, Geography, Biology/ Agriculture, Chemistry/Physics, - Certificate in any relevant areas from recognised Institutions	3 years

PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS:	DURATION
Diploma in Technology in Atmospheric science	• <i>KSCE C-(Minus) with at least C- in English, Geography, Biology/ Agriculture, Chemistry/Physics,</i> • <i>Certificate in any relevant areas from recognised Institutions</i>	3 years
Certificate in Environmental Studies	• <i>KSCE D+(Plus)</i> • <i>Those working in various ministries and NGO on environment related matters.</i>	1 year
Master of Technology in Environmental Resource management	• <i>2nd Class honors, Upper Division</i> • <i>B.Sc. Environmental Resource Management</i> • <i>B.Sc. In Environment related courses</i>	2 years
Intake: September every year		

CAREER PROSPECTS ▼

Department of Geoscience and Environment (DGES) graduates work with Kenya Agricultural Research Institutes, National Environmental Management Authority (NEMA) at national and County levels, Kenya Wildlife service, Kenya Forest Research Institute (KEFRI), Ministry of Water, Ministry of Environment and Mineral resources, Mines and Geological departments, United Nations Environmental programme (UNEP), UN-Habitat, Ministry of Fisheries, City and Municipal Councils, National Museums of Kenya, International Centre for Insect Physiology and Ecology(ICIPE), ILIRI, Meteorological Department, Kenya Agricultural Research Institute(KARI), Ministry of Agriculture, Ministry of Fisheries, Department of Climate Change, universities, marine research institutes and Ministry of Forest and Wildlife Resources. We at DGES are determined to produce top environmentalists, environmental technologists and technicians who will apply their skills innovatively to conserve the environment for sustainable development.

Department of Materials Science and Technology

Modern economies are predicated on manufacturing to support all sectors of the economy such as; agriculture, health, communication, construction, energy, education, and defence; in addition to providing the day-to-day needs of society. Manufacturing therefore, lies at the heart of any functional modern economy. Manufacture however, cannot be without a proper understanding of the materials that form products, equipment and infrastructure. The Technical University of Kenya have developed curricula that reorients such understanding to include knowledge of the occurrence, extraction, chemical and physical nature, processing, treatment, formation processes of materials aimed at producing and improving products, and post production performance, treatment and maintenance. In our training, we incorporate the trending technologies and processes to make the overall production favourable and functional to the ultimate user.

Department of Physics and Space Science

Physics is one of the foundational subjects in engineering and technology. The department equips the student with applicable, practical, knowledge of physics that find place in industry. The Department is thus designed to provide programmes of study in technical and applied physics with strong orientation to applications in industryand space science and its application to socio-economic development.



PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS:	DURATION
Bachelor of Technology (Technical and Applied Physics)	• <i>C+ mean grade (in addition C+ in Mathematics, physics and chemistry, English) or</i> • <i>TU-K Diploma in Technology (Technical and Applied Physics)</i>	8 semesters
Diploma in Technology (Technical and Applied Physics)	• <i>C (plain) Minimum</i> • <i>C (Plain) in Physics, Chemistry, Mathematics, English or Swahili.</i>	6 semesters
Intake: September every year		

CAREER OPPORTUNITIES ▼

Employers of our graduates are in the fields of energy, polymer, ceramics and glass. In government sector opportunities are available in Ministry of Trade and Industries, Kenya Bureau of Standards among others while in private sector; research bodies, Educational Institutions such as universities laboratories, as well as colleges and secondary schools are in need of qualified physics technologist/ technicians.

CENTRE FOR SCIENCE AND TECHNOLOGY STUDIES



Director: DR. PATRICK DIKIRR

Senior Lecturer – Centre for Science and Technology Studies
csts@tukenya.ac.ke

MISSION

To provide a collaborative platform for bridging academic disciplines and forge new research initiatives across disciplinary boundaries with a view to promoting a broad creative culture of inquiry.

Dr Patrick Maison Dikirr, a Senior Lecturer and acting Director of the CSTS, has vast teaching and research interests spanning across different fields and disciplines, such as science, technology and society studies; the Science and politics of climate change; Africa’s indigenous knowledge systems; critical and creative thinking; environmental pan-Africanism; globalization; democratization and normative features of the global order; relevance of African philosophy to issues of development in Africa, and; the promise and challenges of building a foundation of a new moral republic in Africa

WHAT WE DO

EDUCATION

The Centre aims to encourage the integration of historical outlook, economic considerations, ethical deliberations, sociological perspectives and policy informed contexts into science

THE Centre for Science and Technology Studies (CSTS) takes an inter-disciplinary perspective focusing on; (a) the impact that advancements in science and technology have on human lives and livelihoods and (b) the influence that society and culture exerts on the evolution of science and technology. The Centre houses four departments. These are History and Philosophy of Science and Technology, Science and Technology in Society, Sustainability Science and The Universe, Life and Humanity.

and technology curriculum and to facilitate collaborative interdisciplinary, inter-sectoral and intergenerational research contexts and learning environments. The Centre’s activities include, but are not restricted to: (a) developing postgraduate curricula on science and technology studies; (b) identifying and then adopting some of the most innovative science and technology learning environments; (c) holding in-house inter-faculty research and teaching collaborations, and; (d) providing continuous seminar series for undergraduate and postgraduate students focused specifically on how science and technology emerge, become institutionalized, evolves through social processes, and impacts and are (in turn) affected by society—socially, culturally, economically, politically and epistemologically.

ON-LINE NETWORKING, COLLABORATIVE TOOLS

The Centre is currently engaged in creating an online portal, a collaborative visualization tool, with the goal of encouraging a wider public engagement and participation on matters concerning, for example, the opportunities and the risks engendered by emergent scientific and technological innovation.

ACADEMIC PROGRAMMES

The Centre is developing class-based and on-line module II postgraduate certificate/diploma courses on the following clusters:

- 1. Science, Engineering and Society
- 2. Biomedicine, Health Technologies and Society
- 3. Science, Technology and Gender
- 4. Science, Technology and Media

- 5. Science, Technological Change and the Environmental
- 6. Science, Technology and Governance
- 7. Science, Technology and Indigenous Knowledge

In addition, the Centre is developing short team-taught courses, to be taught in three to four weeks, organized around emerging multidisciplinary research and learning areas such as

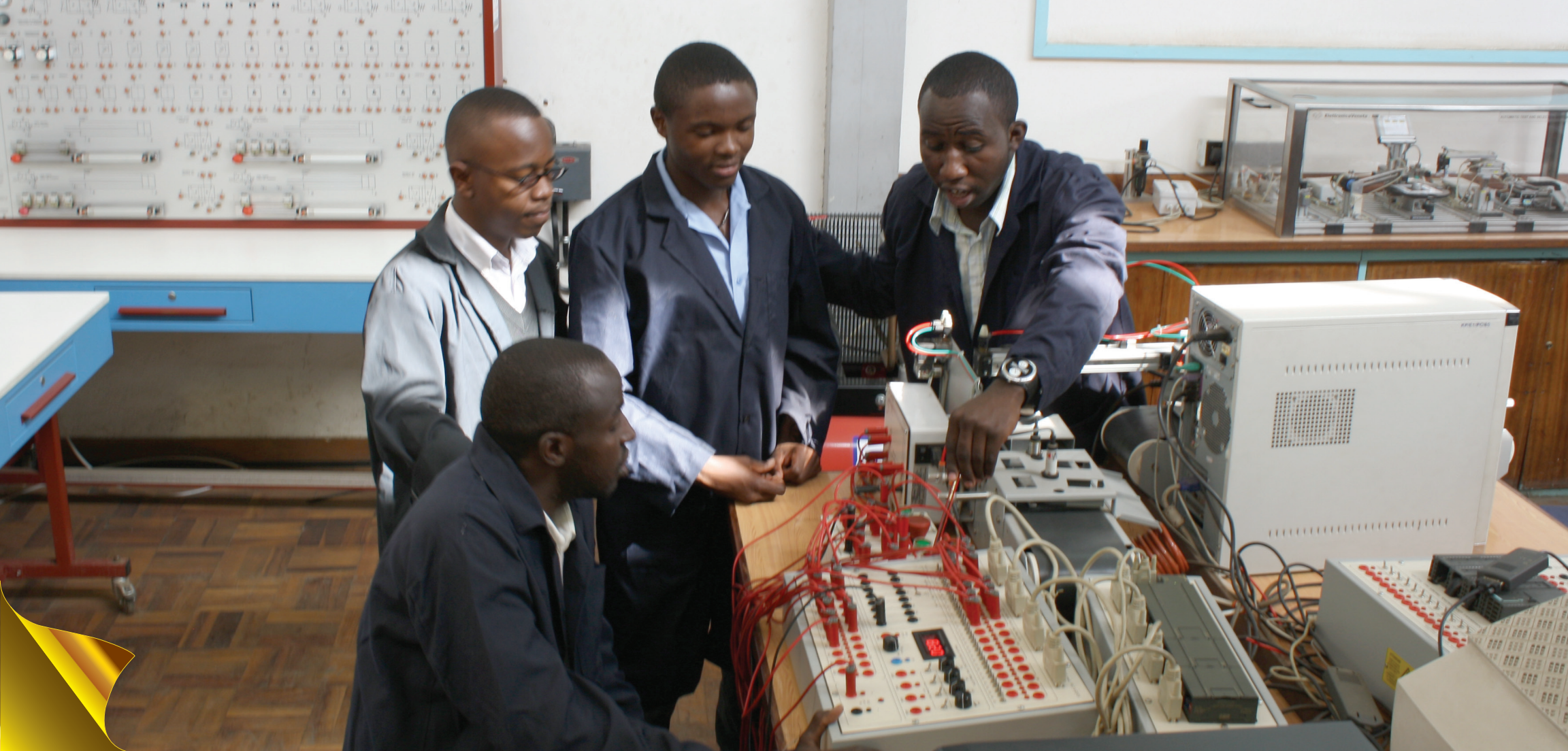
- 1. Food Systems, Safety and Security
- 2. Cyber-Psychology and Changing Notions of Selfhood
- 3. Youth, New Media and Civic Engagement
- 4. Technology and Changing lifestyles
- 5. Technologies and Science Diplomacy

SCIENCE, TECHNOLOGY AND SOCIETY DEBATES

The Centre is also committed in organizing faculty and student led on-campus debates to stimulate reflection and deliberations on how science and technology is, for instance, increasingly changing our world, our livelihoods, and our notion of who we are (or claim to be), the implications these changes presage on society, and how science and technology may be deployed in meeting the increasing –yet complexly layered—challenges of our time, among other concerns.

RESOURCES

Furthermore, the Centre is in the process of securing funding that will enable us (a) to start a Science, Engineering, Technology and Innovation (SETI) summer academy for high school students drawn from typically underrepresented segments of society in Science-based and technology-oriented fields, and (b) to put up an online data base on all science and technology related issues in Kenya



PROF. ALEX M. MUUMBO

Executive Dean | *Faculty of Engineering Sciences and Technology*

**ASSOCIATE PROFESSOR OF MATERIALS ENGINEERING – DEPARTMENT OF
MECHANICAL AND MECHATRONIC ENGINEERING**

E-mail: dean.fest@tukenya.ac.ke

IN THE FACULTY:

School of Architecture and the Built Environment
School of Electrical and Electronic Engineering
School of Infrastructure and Resource Engineering
School of Mechanical and Process Engineering
School of Surveying and Geospatial Sciences
Centre for Engineering Innovation and Production

FACULTY OF ENGINEERING SCIENCES AND TECHNOLOGY

THE Technical University of Kenya perpetuates its reputation for producing technical expertise in Engineering and the Built Environment. In its quest for quality education and training in these areas, TU-K ensures that design, creative and critical thinking guides the student to acceptable standards of production. This legacy is what keeps employers and other industry stakeholders coming.

The Faculty focuses on training Engineers, Technologists, Technicians and Artisans for the Industry. The Faculty has enrolled over 5000 students studying various Engineering and related disciplines, and recruited qualified staff in the areas of Mechanical, Chemical, Civil, and Aeronautical Engineering, Geospatial Sciences, Architecture and the Built Environment.

All the programmes are linked to the relevant industries at different levels of study to ensure that the students are well trained in industrial practice and professional mentoring. The Faculty has also sourced for state of the art equipment to ensure students are able to adequately link theory to practice. The School of Mechanical and Process Engineering has well equipped workshops with CNC machines besides other equipment for laboratory practice. The School of Electrical and Electronic Engineering also has adequate facilities in the areas of Solar Power, Telecommunications, Robotics and general electronics. In addition, the Faculty has established collaborations with stakeholders in the industry, such as Toyota Kenya, Samsung, Safaricom and Kenya Airways.



INVIOULATE, Capital Works Officer

I work as a Capital Works Officer at the University of Nairobi. I am a registered NEMA Lead Expert No. 1931 and I am also registered with the Architectural Association of Kenya – Construction Project Manager’s Chapter No. 3615.

I graduated from the Kenya Polytechnic with a Diploma in Building and Civil Engineering in 1980 whereupon I was employed as a Structural Assistant in the Ministry of Works. During industrial attachment, I had the opportunity to do apprenticeship at National Industrial Vocational

Training Centre. I was employed by the Kenya Railways Corporation in the Civil Engineering Department in 1982 and worked there until 2011 when I moved to the University of Nairobi where I work to date. While employed at Kenya Railways, I embarked on my Higher Diploma in Construction (Structures Option) graduating in 1986.

The Technical University of Kenya was born and I enrolled for my undergraduate degree, graduating with a Bachelor of Philosophy in Technology (Construction Management) in 2012. I enrolled for

a Masters in Construction Project Management in 2013. I teach as a Sessional Lecturer in the School of Architecture and the Built Environment in this University.

Ladies, the time for demonstrated equality is now. Don’t wait for favours. Let us merit our deeds. Remember what a man can do, a woman can do better, and behind every successful man, there is a woman telling him what to do.

Invioalte Wasike Siboe



- DEPARTMENT OF ARCHITECTURE AND BUILDING SCIENCE
- DEPARTMENT CONSTRUCTION TECHNOLOGY AND MANAGEMENT
- DEPARTMENT OF REAL ESTATE AND PROPERTY MANAGEMENT
- DEPARTMENT OF SPATIAL PLANNING AND DESIGN

SCHOOL OF ARCHITECTURE AND THE BUILT ENVIRONMENT



In the built environment, **Ergonomics** and **Aesthetics** are key values that must be applied in equal measure. As we transfer these skills, we pay particular attention to the trainee’s artistic skills as well as their imaginative capabilities to ensure functionality and success of the end product.

Director: PROF. SYLVESTER MASU Associate Professor – Department of Construction Economics and Management;

director.sabe@tukenya.ac.ke

THE Built Environment is a material, spatial and cultural product of human labour that combines physical elements and energy in forms for living, working and playing. It also encompasses infrastructural systems that support such activity. Training of built environment professionals is crucial as such experts help shape these areas through a variety of specialized and interdisciplinary practices that addresses the design, construction, management, and use of these man-made surroundings. The Technical University of Kenya has picked up on the legacy of its predecessors, the Kenya Polytechnic University College, and The Kenya Polytechnic, which trained competent and creative technicians in a variety of built environment fields.

The School of Architecture and the Built Environment offers cutting edge professional and academic training in the built environment. The school aspires “to be a centre of excellence in learning, creativity and enterprise, promoting economic, social and cultural well being of people through well conceived and managed built environments”.

Department of Architecture and Building Science

Department of Architecture and Building Science is composed of two broad thematic areas; Architecture and Environmental Design. The Architecture part of the Department concentrates on training of Architects and allied fields such as Landscape Architecture, Interior Architecture and Architectural Conservation. The Environmental Design area of focus develops application in environmental building physics and sustainable building construction. The professional programmes in the Department will be subjected to local and international accreditation through the Board of Registration of Architects and Quantity Surveyors; through the Commonwealth Association of Architects (CAA) and the International Union of Architects (IUA). These accreditations will enable our graduates to practice in any part of the World.



PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
B.Tech Architecture	Diploma in Technology (Architecture) or Equivalent with at least 2 years relevant work experience	6 Semesters plus attachments
B.AS/B.Arch:	KCSE mean grade 'C+' with at least C+ in Mathematics, Physics, any Group III and 2nd Group II/2nd Group III, any Group IV/V	B.Arch: 12 Semesters plus attachments
Diploma in Technology in Architecture	- KCSE mean grade 'C-' with at least C- in Mathematics, Physics/ Physical Science, Group III and 2nd Group III or Group IV/V - Or Certificate in Architectural Draughtsmanship plus 1 year relevant experience	6 semesters plus attachments
Certificate in Architectural Draughtsmanship	KCSE mean grade 'D+' with at least D+ in Mathematics, Physics/ Physical Science, Group III and 2nd Group III or Group IV/V	3 semesters
Intake September every year		

CAREER OPPORTUNITIES ▼

Upon graduation, the students may join existing professional architectural firms in any capacity. They are able to register as practicing architects contingent upon completing a prescribed period of pupillage. Graduates may specialize in areas such as Environmental Design, Construction Economics, Urban Planning and Design, Landscape Urbanism and Environmental Building Physics and Sustainable Building Construction, amongst others. They may also take on academic careers in any of the thematic areas of the Urban Studies Programme.

Department of Construction Technology and Management

The Department of Construction Technology and Management trains professionals in Quantity Surveying, Building Construction Technologies and Construction Project Management. These are key professional areas in the building industry. They are regulated nationally through the Board of Architects and Quantity Surveyors of Kenya (BORAQS) and are professionally organized around the Architectural Association of Kenya, the Institute Quantity Surveyors of Kenya (IQSK) and the Institute of Construction Project Manager of Kenya (ICPMK). Internationally they will be accredited by Chartered Institute of Building (CIOB) and Royal Institute of Chartered Surveyors (RICS).

PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Bachelor of Philosophy in Technology (Construction Management)	Higher Diploma in Construction KNEC or Equivalent with at least 2 years relevant work experience	4 Semesters attachments
Bachelor of Science (Quantity Surveying)	Diploma in Building, Civil, Quantity Surveying and Architecture KNEC or Equivalent with at least 2 years relevant work experience	8 Semesters plus attachments
Bachelor of the Built Environment (Construction Management)	Diploma in Construction Management, Building, Civil, Quantity Surveying, and Architecture KNEC/or Dip Tech KPUC or Equivalent with at least 2 years relevant work experience.	8 Semesters plus attachments
Diploma in Technology in Building Construction	KCSE Mean grade 'C-' (minus) in with at least C- in English/Geography, Maths, Physical Science or Physics, CTI	6 Semesters
Diploma in Technology in Construction Management	KCSE Mean grade 'C-' (minus) in with at least C- in English/Geography, Maths, Physical Science or Physics, CTI	6 Semesters
Diploma in Technology in Quantity Surveying	KCSE Mean grade 'C-' (minus) in with at least C- in English/Geography, Maths, Physical Science or Physics, CTI	6 Semesters

PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Bachelor of Technology (Building Construction)	- KCSE mean grade 'C+' with at least C+ in Mathematics, Physics, any Group III and 2nd Group II/2nd Group III, any Group IV/V - Diploma in Technology (Building Technology) or Equivalent with at least 2 years relevant work experience - Diploma in Building and Architecture KNEC or Equivalent with at least 2 years relevant work experience	8 Semesters plus attachments
Diploma in Technology (Building Construction):	- KCSE mean grade 'C-' with at least C- in Mathematics, Physics/Physical Science, Group III and 2nd Group III or Group IV/V - Or Certificate in Building Construction; OR Construction Technician Part 1 (having done Physics at KCSE), plus 1 year relevant experience	8 semesters
Certificate in Building Construction and Construction Technician	- KCSE mean grade 'D+' with at least D+ in Mathematics, Physics/Physical Science, Group III and 2nd Group III or Group IV/V - Or Certificate in Building Construction; OR Construction Technician Part 1 (having done Physics at KCSE), plus 1 year relevant experience	2 semesters (Upgradable)
Intake September every year		

CAREER OPPORTUNITIES ▼

The Department of Construction Technology and Management trains professionals in quantity surveying construction project management and building construction technologies. It also trains technicians in the area of building construction technology with strong 'hands-on' skills. These are key professionals in the building industry. The programmes are packaged to equip graduates at all levels (Construction Technician, Diploma in Technology and Bachelor of Technology) with the necessary skills for employment in construction industry, banking sector, Oil sector, Teaching and research, as well as self employment. Upon graduation, the students who pursued quantity surveying register as practicing quantity surveyors. While those taking construction management become project managers in construction projects/programs. They can pursue Post Graduate programs in Master of Technology in Construction Management, masters of construction Economics and Master of science in Building construction amongst others.

Department of Real Estate and Property Management

Real Estate is a legal term that encompasses physical land and appurtenances affixed to it including improvements, natural resources, and structures both above and below the earth surface. It is both a tangible physical commodity and a source of wealth that is essential and valuable to life and society at large. It provides the foundation for the social and economic activities of people. The business of real estate is diverse, and typically encompasses buying, selling, or renting of land, buildings or housing. It further includes valuation of real estate and real property. Real estate and property professionals engage in the study of property economics, acquisitions, sales and leasing of property, property finance, property development, property valuation, and property investment and analysis.

The Department of Real Estate and Property Management (DE&PM) trains professionals in Real Estate, Property Marketing and Agency, Property Valuation and Management. The key professionals in Real Estate and Property Management are regulated nationally by the Institution of Surveyors of Kenya under the following member chapters: Valuation and Estate Management Surveyors and Land Management Surveyors. Careers in Real Estate and Property Management are: Valuation, Facilities and Estate Management, Estate Agency, Land and Property development and administration.

PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Bachelor of Real Estate and Property Studies	KCSE Mean grade 'C+' (plus) with at least C+ in respective cluster subjects, or Diploma in Technology in Valuation and Property Management from the TU-K or equivalent institution	8 Semesters plus attachments
Bachelor of Real Estate and Property Studies Module II	KCSE Mean grade 'C+' (plus) with at least C+ in respective cluster subjects, or Diploma in Technology in Valuation and Property Management from the TU-K or equivalent institution	6 semesters
Diploma in Technology in Real Estate	KCSE Mean grade 'C-'(minus) with at least C- in Mathematics, physics/ Physical Science and English/ Geography Or certificate in Estate Agency and Real Property	8 semesters plus attachments
Certificate in Estate Agency and Real Property	KCSE Mean grade 'D+'(minus) with at least D+ in Mathematics and English/ Geography	3 semesters
Intake September every year		

CAREER OPPORTUNITIES ▼

The Department of Real Estate and Property Management (RE&PM) trains professionals in Real Estate, Property Agency and Marketing, Property Valuation and Management.

- Pursue Post Graduate Programme in:
- Property Economics and Valuation
 - Facility and Estate Management
 - Property Development and Finance

Career opportunities are in the areas of Valuation, Facility Management, Estate Portfolio Management, Housing and Land Administration, Property Marketing and Agency.

Department of Spatial Planning and Design

Spatial Planning, variously referred to as Urban and Regional Planning seeks to promote the pursuit of a balanced, equitable, harmonious, sustainable and progressive development by providing spatial and institutional frameworks to allow for optimal utilization physical, economic, and socio-cultural resources of a country or region for the benefit of current and future generations.. Planning helps us develop efficiently functioning regions and urban areas, and activity spaces that assist citizens developmental aspirations and pursuits. The discipline has many areas of engagement, including strategic spatial planning, Land use management, human settlements development, regional development planning, urban and metropolitan planning, urban design and development, environment planning, community development, municipal services and facilities, and heritage and tourism planning. With the rapid increase of the population and the relatively high rate of urbanisation in the country and region, there will be continued need for spatial planners in the foreseeable future.



PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Bachelor of Built Environment in Urban and Regional Planning	KCSE Mean grade 'C+' (plus) with at least C+ in respective cluster subjects, or Diploma in Technology in Spatial Planning and Design, Architecture, Geo-spatial Science from the TU-K or equivalent institution	8 Semesters plus attachments plus
Bachelor of Built Environment in Urban Design and Development	KCSE Mean grade 'C+' (plus) with at least C+ in respective cluster subjects, or Diploma in Technology in Spatial Planning and Design, Architecture, Geo-spatial Science from the TU-K or equivalent institution	8 Semesters plus attachments plus
Diploma in Technology in: Spatial Planning and Design	KCSE Mean grade 'C-' (minus) with at least C- in Mathematics, physics/Physical Science and English/Geography	6 Semesters
Certificate in Environmental Impact Assessment	KCSE Mean grade 'D+' (minus) with at least D+ in Mathematics, physics/Physical Science and English/Geography	2 semesters (jointly with the Department of Earth Sciences).
Intake September every year		

CAREER OPPORTUNITIES ▼

Grandaunts' have gained practical skills that make them to effectively take on careers as professional urban and regional planners, planning practitioners in County and City Planning Departments, Regional Development Authorities, Research Institutions and private sector organisations. Professional town planning practitioners in both public and private sectors. Graduates can also take up academic careers in specialized fields such as Urbanism and Urban Design, Landscape Urbanism and Design, Infrastructure Planning and Management, County Governance and Management, and Regional Development Planning.



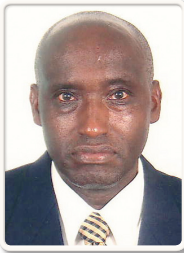
DEPARTMENT OF ELECTRICAL AND POWER ENGINEERING

DEPARTMENT OF TELECOMMUNICATIONS AND INFORMATION ENGINEERING

DEPARTMENT OF ELECTRONICS AND COMPUTER ENGINEERING

DEPARTMENT OF AUTOMATION AND CONTROL ENGINEERING

SCHOOL OF ELECTRICAL AND ELECTRONIC ENGINEERING



Innovation is one way to make the world a better place and even the smallest of innovations is significant enough to improve the life in many ways. Our business is to train the innovators and we invite you to the exciting World of the real Science, Engineering and Technology.

Director: **PROF. STEPHEN MUSYOKI** | Associate Professor – Department of Telecommunications and Information Engineering

director.see@tukenya.ac.ke

ELECTRICAL Engineering is one of the principal branches of engineering and normally counts in this hierarchy with civil engineering, mechanical engineering, and chemical engineering. It comprises two areas: electrical systems and telecommunications systems. These two areas are colloquially referred to as “heavy current” and “light current” respectively. In line with this, most university programmes in electrical engineering have traditionally been organised in the structure of heavy and light currents, which typically then meant electrical systems engineering and telecommunications systems engineering respectively.

Electrical engineering is one of the most competitive programmes amongst students seeking admission to university and every year attracts considerably large numbers of applicants from high school. This is definitely due to the fact that the field of electrical engineering currently offers some of the best employment opportunities to graduates in Kenya. There is clearly still considerable scope for expansion of training opportunities in the discipline in Kenya, because of its significant role in technological development today.

Department of Automation and Control Engineering

Automation is the optimization of production systems and processes through the application of computerised systems. Automated systems today find use in many areas where processes can be computerised such as in the industrial assembly lines. Modern industrial production systems as well as several engineering operations today are virtually automated through the use of robots and robot-like machines. Control engineering deals with application of the principles of control theory in the control of systems and this is “automatic control”. Control engineering finds application in virtually any system that involves some control, whether in industrial production, in the laboratory, or at the household level.

These disciplines cover diverse fields such as information technology, cybernetics, automation, artificial intelligence, and robotics. The interests in these Departments cover mechatronics, robotics, instrumentation, and automated systems in general.

PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Bachelor of Philosophy in Technology in: Electrical and Electronic Engineering	Higher Diploma in: Electrical and Electronic Engineering	4 semesters
Bachelor of Engineering in: Electrical and Electronic Engineering	KCSE mean grade of C+ including C+ in cluster subjects	13 semesters
Bachelor of Technology in: Electrical and Electronic Engineering Technology	KPUC Diploma in Technology in: Electrical and Electronic Engineering Technology	6 semesters plus attachments
Diploma in Technology in: Electrical and Electronic Engineering	KCSE Mean grade C (plain) with C in Mathematics, Physics, and English, or relevant Certificate in Engineering	8 semesters
Diploma in Technology Instrumentation and Control	KCSE Mean grade D+ with D+ in Mathematics, Physics, and English, or relevant Certificate in Engineering	8 semesters
Electrical Installation Technician III	Pass in Certificate in Electrical Installation Technician II or Electrical Installation Craft Final (KNEC) OR Equivalent	3 semesters
Electrical Installation Electrician III	KCSE mean grade D (plain)	3 semesters
Electrical Installation Electrician II	Pass in Electrical Installation Electrician III or Grade Test III	3 semesters
Electrical Installation Electrician I	Pass in Electrical Installation Electrician II or Grade Test II	3 semesters
Certificate in Refrigeration & Air Conditioning	KCSE mean grade D+ (plus)	3 semesters
Certificate in Electronics Technician Part III (CET III)	Pass in Certificate in Electronics Technician II or Equivalent	3 semesters
Certificate in Electronics Technician II	Pass in Certificate in Electronics Technician I	3 semesters

PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Certificate in Electronics Technician I	KCSE Mean grade C- (minus)	3 semesters
Certificate in Electrical Installation Technician II	Pass in Certificate in Electrical Installation Technician I	3 semesters
Certificate in Electrical Installation Technician I	KCSE Mean grade C- (minus)	3 semesters
Intake		September every year

Department of Electrical and Power Engineering

This Department of Electrical and Power Engineering is concerned with the theory and application of electricity and the study of electrical systems based on the fundamentals of electrical engineering. The studies cover the use of electricity in various environments such as used in various types of machinery, industries, and in households. Special emphasis is given to the area of power engineering, which deals with the generation, transmission, distribution and use of electrical power. This Department studies electrical power systems in its broadest sense covering various modes of generation of electrical energy including hydroelectric, nuclear, geothermal and solar energy.

PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Bachelor of Philosophy in Technology in: Power systems	- Higher Diploma in: Electrical and Electronic Engineering - KCSE mean grade of C+ including C+ in the cluster subjects - KPUC Diploma in Technology in: Electrical and Electronic Engineering technology	4 Semesters
Bachelor of Engineering in: Power systems	- Higher Diploma in: Electrical and Electronic Engineering - KCSE mean grade of C+ including C+ in the cluster subjects - KPUC Diploma in Technology in: Electrical and Electronic Engineering	13 Semesters
Bachelor of Technology in: Power Systems	- Higher Diploma in: Electrical and Electronic Engineering - KCSE mean grade of C+ including C+ in the cluster subjects - KPUC Diploma in Technology in: Electrical and Electronic Engineering technology	6 Semesters
Diploma in Technology Power Systems	- KCSE mean grade of C- including C- in the cluster subjects - KPUC Certificate in Electrical and Electronic Engineering Technology	6 semesters
Certificate in Electrical Installation Technician	KCSE mean grade of D+ including D+ in Mathematics and in the cluster subjects	3 semesters
Certificate in Electrical Installation Electrician	KCSE mean grade of D+ including D+ in Mathematics and in the cluster subjects	3 semesters
Intake		September every year

Department of Electronics and Computer Engineering

This Department specialises in computer engineering, with design and construction of computers and computer systems taking centre stage. Computer engineering is heavily based on the electronics and microprocessor technologies. Hence, computer engineering is studied alongside electronics. Computer engineering is typically considered to comprise the specialist areas of computer software engineering, hardware engineering, and systems engineering. The programme in electronic and computer engineering offers specialisations in electronics, computer software engineering, computer hardware engineering, and computer systems engineering.

PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Bachelor of Philosophy in Technology in: Electronic and Computer Engineering	- Higher Diploma in: Electrical and Electronic Engineering - KCSE mean grade of C+ including C+ in the cluster subjects - KPUC Diploma in Technology in: Electrical and Electronic Engineering technology	4 Semesters plus attachments
Bachelor of Engineering in: Electronic and Computer Engineering	- Higher Diploma in: Electrical and Electronic Engineering - KCSE mean grade of C+ including C+ in the cluster subjects - KPUC Diploma in Technology in: Electrical and Electronic Engineering technology	13 Semesters
Bachelor of Technology in: Electronic and Computer Engineering	- Higher Diploma in: Electrical and Electronic Engineering - KCSE mean grade of C+ including C+ in the cluster subjects - KPUC Diploma in Technology in: Electrical and Electronic Engineering technology	6 Semesters plus attachments
Diploma in Technology Electronics and computer engineering	KCSE mean grade of C+ including C+ in the cluster subjects	4 semesters
Certificate in Electronics Technician	KCSE mean grade of D+ including D+ in the cluster subjects	2 semesters
Intake		September every year

Department of Telecommunications and Information Engineering

The modern developments in communication and information technologies have tremendously transformed the field of electrical engineering. Today, Telecommunications and Information Engineering is involved with technologies such as satellite communication systems, mobile telephony and Internet communication systems. The common factor in these technologies is information technology, which in itself is driven by computer technology and engineering. Telecommunications and information engineering integrates



computer systems, information, technology and telecommunications systems engineering. In Kenya, telecommunications and information engineering is today one of the fastest growing sectors, hence the need for expertise in this area. This shortage of expertise inhibits the full realisation of the potential of the sector in the economic growth of the country. In many cases, it has been necessary to import expertise from other countries in order to keep the industry running. Through the establishment of the Department of Telecommunications and Information Engineering, TU-K wants to contribute to the alleviation of this shortage.

PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Bachelor of Philosophy in Technology in: Telecommunications	- Higher Diploma in: Electrical and Electronic Engineering - KCSE mean grade of C+ including C+ in the cluster subjects - KPUC Diploma in Technology in: Electrical and Electronic Engineering technology	4 Semesters
Bachelor of Engineering in: Telecommunications	- Higher Diploma in: Electrical and Electronic Engineering - KCSE mean grade of C+ including C+ in the cluster subjects - KPUC Diploma in Technology in: Electrical and Electronic Engineering technology	13 Semesters
Bachelor of Technology in: Telecommunications	- Higher Diploma in: Electrical and Electronic Engineering - KCSE mean grade of C+ including C+ in the cluster subjects - KPUC Diploma in Technology in: Electrical and Electronic Engineering technology	6 Semesters
Diploma in Telecommunication systems	KCSE mean grade of D+ including D+ in the cluster subjects	6 Semesters
Intake		September every year



DEPARTMENT OF CIVIL AND CONSTRUCTION ENGINEERING

DEPARTMENT OF BIOSYSTEMS AND ENVIRONMENTAL ENGINEERING

DEPARTMENT OF MINING AND MINERALS ENGINEERING

DEPARTMENT OF ENGINEERING ECONOMICS AND MANAGEMENT

SCHOOL OF INFRASTRUCTURE AND RESOURCE ENGINEERING



The Technical University of Kenya is bringing a unique mix of skills and knowledge, to change the entire infrastructure and resource engineering landscape. From civil engineering to mining engineering, we add a new impetus to education and training...

Director: DR. GEORGE O. OKWADHA | Senior Lecturer – Department of Civil and Construction Engineering
director.sire@tukenya.ac.ke

THE growth of an economy depends significantly on the development of its infrastructure, and the management of its resources. Governments are investing heavily in infrastructure to spur and sustain development. To this end, the governments look up to institutions of higher learning to provide the necessary teaching, learning, research and development skills that culminate into competent manpower.

The School of Infrastructure and Resource Engineering (SIRE), was established in January 2014 to offer cutting edge professional and academic training in line with the College's motto of 'Education and Training for the Real World'. It is the SIRE idea that creative and Innovative imagination for present and future infrastructure can only be achieved through collaboration with industry and public participation. The school's industry-driven research initiatives are transformative, and designed to solve real-world problems. These programmes are specifically designed to enable the students and lecturers to develop new concepts in collaboration with industry to solve real-world problems.



Department of Civil and Construction Engineering

Civil Engineering profession is one of the core disciplines within engineering that deals with the infrastructure of society. From meeting most fundamental needs like clean water, clean water structures, and safe roads to creating transformative technologies that change how people work and play, Civil Engineers touch every aspect of life. Civil Engineering graduates find career opportunities in both the public and private sector. Civil engineers deal with the design, construction and maintenance of roads, bridges, airfields, harbours, railway systems, canals, dams, power generation plants, water supply and sewage systems and other retaining structures, and structural framework of buildings and other structures, and their foundations, balancing service satisfaction with nature.

The Department offers courses that are well structured to meet the ever changing demands of the civil engineering and construction industry. We also offer specialized courses at Certificate and Diploma levels on request from Government Departments, Local Authorities and the industry. Some of the popular certificate courses include Certificate in Civil Engineering, Fire Engineering, and Computer Aided Drawing and Design CADD (AutoCAD, ArchiCAD etc.).

All the courses offered in the Department are designed to impart practical skills to enable graduates enter the job market as productive employees or self employed people. Our Diploma in Technology graduates sought-after in the construction industry.

The following programmes are offered in the Department of Civil and Construction Engineering:

PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Bachelor of Engineering, Civil Engineering	• KCSE mean grade 'C+' with at least C+ in Mathematics, Physics, Chemistry, and Biology/any Group III/IV/V	13 Semesters
Bachelor of Technology, Civil Engineering	• KCSE mean grade 'C+' with at least C+ in Mathematics, Physics, Chemistry, and Biology/any Group III/IV/V or Ordinary Diploma, Diploma, Diploma in Technology (Civil, Water Engineering) or equivalent.	8 Semesters plus attachments
Bachelor of Philosophy In Technology, Civil Engineering	• Higher Diploma in Construction (Highways, Structures, Water, Building & Construction, Soil Mechanics & Foundation Engineering) or equivalent.	4 Semesters
Diploma in Technology (Civil Engineering)	• KCSE mean grade 'C-' with at least C- in Mathematics, Physics, Chemistry, and Biology/any Group III/IV/V or Ordinary Diploma, Diploma, Diploma in Technology (Civil, Water Engineering) or equivalent	4 Semesters
Certificate in Civil Engineering	• KCSE mean grade 'D+' with at least C- in Mathematics, Physics, Chemistry, and Biology/any Group III/IV/V	2 Semesters
Certificate in Fire Engineering	• KCSE mean grade 'D+' with at least D+ in Mathematics, Physics, Chemistry, and Biology/any Group III/IV/V	2 Semesters
Certificate in Computer Aided Drawing and Design	• KCSE mean grade 'D+' with at least D+ in Mathematics, Physics, Chemistry, and Biology/any Group III/IV/V	2 Semesters
Intake September every year		

Department of Biosystems and Environmental Engineering

The Department of Biosystems and Environmental Engineering in the School of Infrastructure and Resource Engineering, will train in Biosystems and Environmental engineering and equip the candidates with the skills that will normally allow for eventual practice as an engineer. Curricula are under development at Certificate, Bachelor of Technology and Bachelor of Engineering, Masters and Doctoral level, aiming to provide the student with skills to conceptualize solutions to engineering problems and to prepare designs for the production of engineering artifacts, structures, and systems.

The application of engineering principles to any process associated with the production of biologically based goods and the management and protection of our natural resources constitutes biosystems and environmental engineering. This Department imparts skills on the application of engineering science and technology in agricultural production and processing; land and water management as well as aspects of climate change; and the application of engineering science and technology in biological and food processing. Our

programmes focus on the attainment of the middle income economy status with the guidance of the tenets of the Kenya Vision 2030. In this regard, our training, research and development activities are geared towards the reclamation of the vast under-utilised but fragile arid and semi-arid lands (ASAL) ecosystems, which define two-thirds of Kenya’s biosphere. At the same time, our energies focus on revamping the already developed one-third ecosystems into commercially oriented, competitive, environmentally sound and climate smart and responsive systems.

This is a new Department and its curricular and programmes are under development. The Department will admit its first students in the 2015-2016 academic year. The envisaged specialization areas in the curriculum include:

PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Environmental Engineering	• KCSE mean grade of C+ including C+ in the cluster subjects	8 Semesters
Irrigation and Water Resources Engineering	• KCSE mean grade of C+ including C+ in the cluster subjects	8 Semesters
Power and Machinery Engineering	• KCSE mean grade of C+ including C+ in the cluster subjects	8 Semesters
Bioprocess Engineering	• KCSE mean grade of C+ including C+ in the cluster subjects	8 Semesters
Infrastructure Engineering	• KCSE mean grade of C+ including C+ in the cluster subjects	8 Semesters
Intake September every year		

Department of Mining and Minerals Engineering

The mission of the Mining and Minerals Engineering Department is to produce high quality, rigorously trained mining and minerals engineers, whose background and education reflect the current level of technology and thought of the profession while maintaining the tradition and style of the trade, and who can enter directly into engineering practice or further studies in their chosen areas of study. Mining engineering covers the exploitation of any natural resource through mining technology. Such resources would include quarry stones, minerals, and even water, as well as the technology of tunneling. In many respects, the technologies of mining engineering are akin to those used in civil engineering, and to this extent, this Department will cover mining engineering in addition to its traditional areas.

Our programs are designed to enable our graduates to take leading roles in the management of minerals and mining companies as well planning and executing research and development work. The emphasis will be to create and establish an environment which motivates the students and lecturers to discover in lecture rooms, laboratories and workshops, innovate in collaboration with industry, design the innovations, and lead in their respective areas of expertise. Key areas will include mining and minerals engineering, geology, environmental management, geotechnics, surveying and renewable energy, which will provide an excellent basis for careers within the Earth resources, civil engineering, environmental and energy sectors. Our research initiatives and teaching will instil the culture of understanding and managing the Earth’s natural processes, resources (minerals, hydrocarbons, energy) and the environment.

Department of Engineering Economics and Management

With the rapid evolution of technology, the major interest in the execution of engineering projects has shifted to “optimization and sustainability”. With focus on optimization and sustainability, two new disciplines have joined technology as core areas of knowledge expected of the engineer; economics and the environment. TU-K appreciates that the engineer today must be conscious of the economic and environmental implications of their projects. Department of Engineering Economics and Management will train the engineer to demonstrate cost-benefit analysis for their projects on one hand, and ensure that their projects do not have negative impacts on the environment but instead promote the tenets of a sustainable environment on the other hand.

The importance of these two factors in the practice of engineering are firmly recognised in the definition of engineering as given by the Accreditation Board for Engineering and Technology (ABET). The Department seeks to respond to the modern requirements in the realisation of engineering projects. Its mandate covers engineering economics, sustainable engineering, engineering management, and business engineering.



- DEPARTMENT OF AEROSPACE AND AVIATION ENGINEERING
- DEPARTMENT OF CHEMICAL AND PETROLEUM ENGINEERING
- DEPARTMENT OF INDUSTRIAL AND MANUFACTURING ENGINEERING
- MECHANICAL AND MECHATRONIC ENGINEERING

SCHOOL OF MECHANICAL AND PROCESS ENGINEERING



Precision. Craftsmanship. Functionality. These are some of the principles applied during the teaching and learning sessions. So, why not come and explore your abilities with us...?

Director: **PROF. REUBEN O. MARWANGA** | Associate Professor – Department of Industrial and Manufacturing Engineering director.smpe@tukenya.ac.ke

MECHANICAL engineering deals with the study, design, construction, and maintenance of mechanical systems. It is closely connected with other disciplines of engineering such as materials engineering, metallurgical engineering, aerospace engineering, automotive engineering, and manufacturing engineering. Process engineering on the other hand is concerned with the design, control, and operation of physical, chemical, and biological processes. Process engineering finds its application in a vast range of industries including chemical, food, petrochemical, biotechnological, mineral processing, materials, and environmental. The two over-arching areas of engineering to production engineering and process engineering are mechanical engineering and chemical engineering.

The School of Mechanical and Process Engineering focuses on aspects of engineering that are concerned with mechanical and manufacturing systems on one hand and process engineering on

the other hand. The specific areas of study covered are aerospace and aviation engineering, chemical and process engineering, industrial and manufacturing engineering, and mechanical and materials engineering.

Department of Aerospace and Aviation Engineering

The exponential growth in the global air transport industry has driven the corresponding demand for specialist aviation professionals, especially engineers and pilots. In tandem with other countries where aviation plays a key economic role, serious shortage of industry professionals has been reported widely in Kenya. This situation has been aggravated by stiff competition for such personnel from other countries, especially the airlines in the Middle East and Gulf States. As a consequence, air operators and maintenance and repair organisations (MROs) have been forced to source key technical staff from other countries, often at relatively higher costs. Towards the satisfaction of local demand, aeronautical and aviation engineering courses have been conducted at The Technical University of Kenya’s predecessor institutions (Kenya Polytechnic and Kenya Polytechnic University College) from the later part of 1960’s. TU-K’s successes in this area can be attested by the fact that a large portion of technical managers and technicians involved in the maintenance of aircraft in Kenya today are graduates of TU-K. Hence in response to ever increasing demand for skilled technical resource, TU-K has created a dedicated Department of Aerospace and Aviation Engineering and recruited a Chartered Engineer with a Doctoral Degree and a substantive international experience to lead the necessary expansion of academic provisions planned for the department.

Aerospace engineering is concerned with the design, construction, and maintenance of aircraft and outer space vehicles and their navigation systems. In complement, aviation engineering is more systems-centric and mainly entails the design, construction, and management of air transport systems including airports, navigation systems, air traffic management, and air transport management. The Department currently offers an undergraduate degree programme in aeronautical and aviation engineering with specialisations in aeronautical and aviation engineering.

In order to ensure high quality and continued relevance of the TU-K aerospace programmes, the University is developing the compliance regime for accreditation by the Engineers Board of Kenya. Accreditations by other international professional bodies concerned with aeronautical engineering programmes are also being sought, notably the Royal Aeronautical Society (RAeS) and Institution of Mechanical Engineers (IMechE), both of the UK.

PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Bachelor of Engineering in Aeronautical Engineering	• <i>KCSE mean grade of C+ including C+ in cluster subjects</i>	13 semesters
Bachelor of Science in Aeronautical Engineering with Pilot Studies	• <i>KCSE mean grade of C+ including C+ in cluster subjects</i>	8 semesters plus attachments
Bachelor of Technology in Aircraft Maintenance Engineering	• <i>Diploma in Aeronautical Engineering AND Aircraft Type Release Approval/License for</i>	8 semesters plus attachments

PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Diploma in Technology in Aeronautical Engineering – Options: •Airframes and Engines • Avionics	• <i>KCSE mean grade of C- including C- in the cluster subjects</i>	4 semesters
Certificate in Technology – Options: Airframes and Engines • Avionics • Helicopter Maintenance	• <i>KCSE D+</i>	2 Semesters
<i>Intake</i> September every year		

Department of Chemical and Petroleum Engineering

Chemical engineering is concerned with the application of engineering and scientific principles in the conversion of materials and chemicals from one form into another. The work of the chemical engineer involves designing, constructing, operating and maintaining the plants (hardware) and processes (software) that convert one chemical form to another that is of more utility to humanity or is less harmful to the environment. Some of the specific industries in Kenya where Chemical Engineers serve include: petrochemicals, construction materials, food processing, pharmaceuticals and home care products. Internationally, chemical engineers serve an even wider role and one will typically find them working in industries as diverse as semi-conductor manufacturing, environmental technology, and biotechnology. As the nation of Kenya gears towards Vision 2030 and the expected industrial development, Chemical Engineers will have an even more significant role in the national economy.

PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Bachelor of Engineering in: Chemical Engineering	• <i>KCSE mean grade of C+ including C+ in the cluster subjects</i>	16 semesters
Bachelor of Technology in: Chemical Engineering	• <i>KCSE mean grade of C+ including C+ in the cluster subjects</i> • <i>Diploma in Chemical Engineering or equivalent</i>	11 semester for KCSE, 4 semesters for Diploma holders
<i>Intake</i> September every year		

CAREER OPPORTUNITIES ▼

Chemical Engineers are professionals who work in various industries involved in the conversion of one chemical form to the other. In these various industries, the chemical engineer does the work of designing, constructing, operating and maintaining the plants (hardware/equipment) and processes (techniques/methodologies) that convert one chemical form to another that is of more utility to humanity or that is less harmful to the environment.

Some of the specific industries in Kenya where Chemical Engineers serve include: petrochemicals

processing, construction/building materials processing, food processing, pharmaceuticals and home care products manufacturing. Internationally, they serve an even wider role and you will also find them working in industries as diverse as semi-conductor manufacturing, environmental technology, biotechnology.

Department of Industrial and Manufacturing Engineering

The Department of Industrial and Manufacturing Engineering is established as one of the Departments in the School of Mechanical and Process Engineering. Industrial engineering is concerned with the optimization of complex, integrated, processes and systems of various resources including technology, finances, information, and people. Industrial engineering, as a branch of engineering, seeks to integrate the methodologies in engineering and technology, business and management, and socio-political and economics in offering optimal solutions to complex, integrated, problems in society. The principles and methods of industrial engineering can be applied onto any system of human endeavour that can be optimized. Closely connected to industrial engineering is manufacturing engineering. Manufacturing engineers design and fabricate various parts of machinery and get involved in putting them together to produce machinery or systems. The work of the manufacturing engineer typically involves such activities as design, fabrication, and analysis of products and systems and the use of modern technologies that are chiefly based on electronics and informatics.

Due to the relative closeness in objectives between industrial and manufacturing engineering, the two fields of engineering are usually found to be close and complementary to each other in the solution of respective engineering problems. Currently in Kenya, there is no programme of study dedicated to industrial and manufacturing engineering as such there is some opportunity to study industrial and manufacturing engineering as part of programmes in the school of mechanical and process engineering.

CAREER OPPORTUNITIES ▼

Due to the relative closeness in objectives between industrial and manufacturing engineering, the two fields of engineering are usually found to be close and complementary to each other in the solution of respective engineering problems. Careers in industrial and manufacturing engineering. Work as manufacturing engineers in design, fabrication, and analysis of products and systems and the use of modern technologies chiefly based on electronics and informatics.

Department of Mechanical and Mechatronic Engineering

Mechanical engineering is the study, design, construction, and maintenance of mechanical systems. It is closely related with other disciplines of engineering such as materials engineering, metallurgical engineering, aerospace engineering, automotive engineering, manufacturing engineering, chemical engineering, electrical engineering, and civil engineering. Because of its very central position within the field of engineering, mechanical engineering has probably the widest representation of any engineering discipline in university. Besides the core subject area of mechanical engineering, the merit of the Department covers as well materials and mechatronic engineering.

Mechatronics is a modern area of engineering that integrates, in a synergistic manner, the principles of mechanics, electronics, and informatics. Tetsuro Mori, a senior engineer at the Japanese company Yaskawa Electric Corporation coined the term ‘mechatronics’ in 1969 from the combination of mechanics and electronics. While at the time mechatronics was just considered to be a combination of mechanics and electronics, over the time however the scope of the term has been expanded to cover more technical terms, in particular, informatics. TU-K already prides itself in the successful launch of various undergraduate degree programmes in this field, which are largely technical in nature.

PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Bachelor of Philosophy in Technology in: Mechanical Engineering	• <i>Higher Diploma in: Mechanical Engineering</i>	4 Semesters
Bachelor of Engineering in: Mechanical Engineering	• <i>KCSE mean grade of C+ including C+ in the cluster subjects</i>	13 Semesters
Bachelor of Technology in: Mechanical Engineering	• <i>KPUC Diploma in Technology in: Mechanical Engineering</i>	6 Semesters
Diploma in Technology in Mechanical Engineering – Options: Manufacturing Engineering • Industrial Plant Engineering • Automotive and Autotronic Engineering • Air-Conditioning and Energy Engineering • Structural Fabrication and Materials Engineering • Metallurgical and Materials Engineering	• <i>KCSE mean grade of C- including C- in the cluster subjects</i>	4 Semesters
Diploma in Technology in Mechatronic Engineering	• <i>KCSE mean grade of C- including C- in the cluster subjects</i>	2 Semesters
Certificate in Motor Vehicle Mechanic – Options: Motor Vehicle Mechanic I and II • Auto-Electrician Stage I • Auto-Electrician Stage II • Certificate in Refrigeration & Air Conditioning • Mechanical Engineering Technician Part I (Plant) • Mechanical Engineering Technician Part II (Plant and Production) • Certificate in Fabrication & Welding	• <i>KCSE mean grade of C+ including C+ in the cluster subjects</i>	2 Semesters
AutoCAD		
<i>Intake</i> September every year		



SCHOOL OF SURVEYING AND GEOSPATIAL SCIENCES



Surveying and Geospatial Sciences makes us understand the world around us. Using the technologies and knowledge we acquire, we can make sound decisions that will affect virtually all aspects of human life. Let's embrace it.

Director: DR. GORDON O. WAYUMBA | Senior Lecturer – Department of Surveying Science and Technology
director.ssgs@tukenya.ac.ke

OUR world is very interesting and fascinating when we understand its nature and how it affects our lives. The sustainability of the environment heavily depends upon how we manage the geography and demographics of planet earth. Surveying takes a closer look at the measurement and graphical representation of the object earth as well as the environment and to some extent space around it. Its application has contributed to the discovery and mapping of new lands, construction of engineering projects, and the management of land and landed property. The rapid growth of information, communication, and space technologies has changed the entire surveying landscape, as exemplified by the widespread use of the technologies of positioning and navigation, geospatial information systems, and remote sensing. The Technical University of Kenya has committed to not only impart surveying and geospatial skills to students, but also reorient the geospatial technologies and acquired knowledge to practical application for decision making in management of key sectors of the national and global economies. In recent times however, the traditional discipline of ‘surveying and mapping’ has expanded due, in part, to the developments in information, communication, and space technologies and the widespread use of the

technologies of positioning and navigation, geospatial information systems, and remote sensing. Taking cognizance of the high demand of geospatial sciences in many areas of application, it is found prudent to develop a whole new school, the School of Surveying and Geospatial Sciences, to deal with the various aspects of the discipline. Apart from typical geospatial sciences, the School also offers a Bachelors Degree in Land Administration, and is TU-K is the only university in Kenya that offers this programme. The school comprises the Departments of Geodetic Science and Navigation, Geoinformation and Earth Observation, Surveying Science and Technology, and Land Administration and Information.



Department of Geodetic Science and Navigation

Geodetic science is the study of the figure and size of the earth and the application of this knowledge thereof. Navigation on the other hand is concerned with the guiding of a moving land-craft, water-craft, aircraft, or spacecraft to a specified destination. The knowledge from geodetic science is applied in positioning, mapping, and navigation. The advent of space technologies like the Global Positioning System (GPS), has considerably made the application of geodetic science accessible to most people. Notably, through the GPS, positioning and navigation have become relatively common through the use of simple equipment such as the mobile telephone and on-board navigation equipment for various types of craft. The Department of Geodetic Science and Navigation has extended studies in this discipline, in response to various industry needs and recent technological developments. Through our commitment, geodetic science has become accessible to people through its results, particularly in positioning and navigation.

Geoinformation is concerned with the collection, presentation, and analysis of geospatial data. This data is useful in the analysis of spatial phenomena. Geoinformation is presented and analysed through the use of Geospatial Information Systems (GIS). GIS itself relies on mapping technology as the basis for any GIS analysis is a reliable map. One of the applications of earth observation technologies is in mapping. Thus this Department covers among its areas of interest, remote sensing, photogrammetry, cartography, and GIS.

PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Bachelor of Philosophy (Geo-information Technology)	• Higher Diploma in: Cartography, Photogrammetry or Remote Sensing	4 Semesters

PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Bachelor of Technology (Geo-information Technology)	• KPUC Diploma in Technology in Geoinformation Technology	6 Semesters
Bachelor of Engineering in Geospatial Engineering	• KCSE Mean grade C+ (plus) with C in Mathematics, Physics, and English, or relevant Certificate	5 years
Bachelor of Applied Science in Geoinformation and Information and Communication Technology	• KCSE Mean grade C+ (plus) with C+ in Mathematics, Physics, and English, or relevant Certificate	5 years
Bachelor Geographical Information Systems (GIS)	• KCSE Mean grade C- (plus) with C- in Mathematics, Physics, and English, or relevant Certificate	8 semesters
Diploma in Land Surveying	• KCSE Mean grade C- (plus) with C- in Mathematics, Physics, and English, or relevant Certificate	8 semesters
Diploma in Technology (Geo-information Technology)	• KCSE Mean grade C- (plus) with C- in Mathematics, Physics, and English, or relevant Certificate	8 semesters
Diploma in Geoinformatics	• KCSE Mean grade C- (plus) with C- in Mathematics, Physics, and English, or relevant Certificate	8 semesters
Certificate in Geographic Information Systems	• KCSE Mean grade C- (plus) with C in Mathematics, Physics, and English, or relevant Certificate	8 semesters
Intake September every year		

Department of Land Administration and Information

Over the years the land question has continued to be an emotive and sensitive issue in Kenya. But even as much as the land issue was at the centre for the struggle of independence from colonialism in the country, the study of land as a resource for national development has not been given much prominence in academic and professional circles in the country. The study of land development and land economics has focused more on land valuation, estate management, and property development with little focus on land policy issues including administration. The new Kenya Constitution, 2010, has placed considerable emphasis on the proper administration and management of public land. In order to implement the provisions in the constitution in respect to land, considerable expertise in this area will be needed. In order to give this area of study commensurate presence within

the University, the programme of study has been developed and established in the Department of Land Administration and Information. The programmes in the Department cover issues to deal with policy and technical aspects of public land administration including land tenure, cadastral systems, land registration and land information management.

PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
BSC in Land Administration	KCSE Mean grade ‘C+’ (plus) with at least C+ in respective cluster subjects, or Diploma in Technology in Spatial Planning and Design, Architecture, Real Estate, Geo-spatial science from the TU-K or equivalent institution	8 Semesters
Intake September every year		

Department of Surveying Science and Technology

Surveying, taken in the relatively narrow sense as land surveying, is the measurement technologies principally used for the production of maps or setting out of any system. The core of surveying is topometry, which is the measurement and graphic description of topography of any object from that of the earth itself to the smallest item as may be found in manufacturing or medicine. These studies have been collated under the Department of Surveying Science and Technology. The Department is concerned with geospatial measurements and topometric descriptions of objects through the use of various techniques in mapping. The Department is in particular concerned with the application of surveying techniques in engineering, environmental management, manufacturing, and even biomedicine.

PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Bachelor of Philosophy in Surveying Technology	Higher Diploma in: Surveying Technology • Surveying, Cartography, Photogrammetry or Remote Sensing	4 Semesters
Bachelor of Technology in Surveying Technology	KPUC/TU-K Diploma in Technology in Geoinformation Technology or equivalent	6 Semesters
Diploma in Technology in Surveying	KCSE Mean grade C (plain) with C in Mathematics, Physics, and English, or relevant Certificate in Engineering	8 Semesters
Diploma in Technology (Survey Technology)	KCSE Mean grade C (plain) with C in Mathematics, Physics, and English, or relevant Certificate in Engineering	8 Semesters
Certificate in Land Surveying and Cartography	KCSE Mean grade C- (minus) with C- in Mathematics, Physics, and English, or relevant Certificate in Engineering	3 semesters
Certificate Course in Geoinformatics	KCSE Mean grade C (minus) with C- in Mathematics, Physics, and English, or relevant Certificate in Engineering	3 semesters
Intake September every year		

CAREER OPPORTUNITIES ▼

The Surveying graduates are engaged in professions dealing with measurement technologies principally for the production of maps or setting out of any system. They also can be engaged in surveying technology with specializations in engineering surveying, topographic surveying, hydrographic surveying, and cadastral surveying.

CENTRE FOR ENGINEERING INNOVATION AND PRODUCTION



Director: DR. ERIC O. OGUR

Senior Lecturer – Department of Mechanical and Mechatronic Engineering

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The Centre for Engineering Innovation and Production (CEIP) is committed to developing human resource to cater for the needs of the manufacturing and service industries in the area of Tool Technology and Computer Aided Design, Computer Aided Manufacturing and Computer Aided Engineering (CAD/CAM/CAE). CEIP aims to become the preferred Micro, Small and Medium Enterprises (MSME) service provider in manufacturing and service industries with the goal of improving the competitiveness of the industrial sector through expert training, availability of state-of-the-art equipment and high-tech facilities in high-value manufacturing.

OBJECTIVES

Key objectives include; meeting the technological requirements of the Micro Small Medium Enterprise (MSME) sector; meeting the skill deficit in the area of tool engineering and allied trades including skill up gradation of existing manpower, and enhancing the skills of members of the jua kali sector to improve their production potential. Universities are expected to have a growing impact on society. CEIP’s vision, mission and objectives have led to the development of a strategic plan which aims to have a measurable impact on society by means of training highly qualified personnel and conducting, disseminating innovative research work. The environment for training highly qualified employees and research is constantly changing in Kenya. Businesses are facing unprecedented

THE rate of growth of technology, its increasing speed of transfusion, and the increase in the number of innovations worldwide, demands the creation of proper and solid linkages between the sources of knowledge and production units. Such linkages must be conscious of both time and space in order to reduce the time lag between the development of knowledge and its conversion into technology and eventual products. The ever increasing demands of society on quality and safety, and the competitive nature of business in the world today also demand quick feedback and correction measures with respect to products that are placed in the market. Such considerations all point to the development of integrated centres for the development of knowledge and technology, and the subsequent manufacture of related products, as an optimal solution. It is such an innovation that the Centre for Engineering Innovation and Production is intended to be, within which will be the following units: Innovation and Design, Manufacturing and Production, Commercialization and Enterprise, and Technology Transfer and Training.



workforce challenges and are seeking to recruit employees who are highly competent in both the scientific and technical fields. The government is asking universities to play an increased role in key areas of competition, to get involved in society, to consolidate the validity of research results and to establish major partnerships.

ACTION STRATEGIES

CEIP is focusing on four complementary strategic directions to maximize the impact of its actions:

1. Training manpower in specialist trades who are capable of transferring their knowledge to society.
2. Conducting innovative research and development work that has a major impact on society.
3. Optimizing the use of the state-of-the-art equipment for the production of products that will add to the competitiveness of the MSME sector.
4. Building visionary strategic partnerships.

To achieve these objectives, CEIP is organized under the following sections: Innovation and Design, Manufacturing and Production, Commercialization and Enterprise, and Technology Transfer and Training.



Innovation and Design

A robust, growing modern society is dependent on the quality and volume of innovations produced from within it. Kenya has had a serious shortcoming in this area, and it is necessary that it be addressed in a structured and formal way. The unit for innovation and design has the specific objective of supporting and nurturing innovation from amongst the students and members of staff in the university, as well as the surrounding community. This will be done through development of processes and programs that encourage and nurture innovation such as innovation competitions, access to good workshops for testing and development of innovations, mentoring of innovators, support with equipment and parts, as well as financing. The unit also has the mandate to offer support in the development of such innovations to full engineering manufacturing designs, by sourcing for and making available design tools and facilities, as well as making available design support through mentoring. The unit, once properly established and functioning is expected to operate on set targets of quality and number of functional innovations produced within it, which then proceed to full engineering manufacturing designs.

Manufacturing and Production

The objective of this unit is to manufacture and produce innovations and designs developed within the institution, and ones that are brought to it from outside the institution. This way it is then able to create competition for quality and quantity of innovations and designs from all its sources. To achieve its objective, it is necessary that the unit liaises continuously with the School of Mechanical and Process Engineering in respect of equipment, space and skilled manpower to support manufacture and production. In order to support its mandate, the unit has the additional responsibility of actively sourcing for funds and equipment as well as materials not only to maintain its manufacturing capacity but to enhance it as well. The unit intends to maintain strong links with the manufacturing and business sectors in and outside the country, who both serve as partners and markets for its products.

Commercialization and Enterprise

This section has the key mandate of developing entrepreneurial processes and capacity internally as part of its structure, and also with a focus to the various innovations, designs and products arising from CEIP. The mandate of entrepreneurship involves capacity to support the development and establishment of efficient and functional enterprises arising from the proceeds of CEIP that are able to compete with other players in the market. This involves the development and establishment of production, operation, marketing and management systems, as well as sources of funds for establishment and to support growth and necessary research. The mandate of commercialisation involves continuous study of the market in order to determine its needs for product types and quantities in order to advice all the units of CEIT on preferred areas of application. The unit's mandate includes the provision of marketing support for the products of CEIT in order to give them advantage in the market.

Technology Transfer and Training

Besides its mandate as a production unit, the centre also concerns itself with technology transfer and training. Through this, the centre seeks to coordinate training in areas relevant to the activities of the centre. As part of its mandate the centre is involved in the promotion of new inventions and innovations coming out of the activities of the centre within the framework of technology transfer. The centre works closely with industry, including the 'Jua Kali'sector.

SHORT TERM COURSES (3 MONTHS)	
COURSE	ELIGIBILITY CRITERIA
SolidWorks® Modelling & Drafting/ Auto Cad Modelling & Drafting <i>COURSE OBJECTIVE: At the end of course the trainee will be able to acquire skills in Modelling and Drafting using SolidWorks/AUTOCAD software</i>	Certificate in Tool Design - Drawing
MasterCam - Modelling & Drafting <i>COURSE OBJECTIVE: At the end of course the trainee will be able to acquire skills in Modelling and Drafting using MasterCam software</i>	Certificate in CNC Machinist
MasterCam – Machining <i>COURSE OBJECTIVE: At the end of course the trainee will be able to apply skills in machining using CNC machines</i>	Certificate in CNC Machinist
Programming & Operation of CNC Wire EDM <i>COURSE OBJECTIVE: At the end of this course participants will acquire skills in programming and operation of CNC machines</i>	Certificate in CNC Machinist
CNC Programming in Fanuc Controls <i>COURSE OBJECTIVE: At the end of course the trainee will be able to know and operate Fanuc controls (Programming & Operating)</i>	Certificate in CNC Machinist

COURSE	ELIGIBILITY CRITERIA
Programming & Operation of CNC Milling with Fanuc & Siemens Controls <i>COURSE OBJECTIVE: At the end of course the trainee will be able to know and operate Fanuc and Siemens controls (Programming & Operating)</i>	Certificate in CNC Machinist
Programming & Operation of CNC Milling with Fanuc & Siemens Controls <i>COURSE OBJECTIVE: At the end of course the trainee will be able to know and operate Fanuc and Siemens controls (Programming & Operating)</i>	Certificate in CNC Machinist
Certificate in Turning <i>COURSE OBJECTIVE: At the end of this course the participant will acquire skills to operate conventional lathe machine and get the knowledge about all kinds of operation which can be performed on the lathe machine</i>	This course is designed for non-Technical participants who want their career development in the operation of the lathe machine
Certificate in Milling <i>COURSE OBJECTIVE: At the end of this course the participant will acquire skills to operate conventional milling machine and get the knowledge about all kinds of operation which can be performed on the milling machine</i>	This course is designed for non-Technical participants who want their career development in the operation of the milling machine
Certificate in Grinding <i>COURSE OBJECTIVE: At the end of this course the participant will acquire skills to operate conventional grinding machine and get the knowledge about all kinds of operation which can be performed on the grinding machine</i>	This course is designed for non-Technical participants who want their career development in the operation of the grinding machine

MEDIUM TERM COURSES (6 Months)	
COURSE	ELIGIBILITY CRITERIA
Post Graduate Diploma in Tool design and CAD/CAM <i>COURSE OBJECTIVE: At the end of this course the participants will be able to develop various skills in handling Tool Design & Manufacturing projects in the area of CAD/CAM/CAE</i>	Diploma/Degree in Mechanical Engineering
Post Graduate Diploma in Computer Aided Engineering <i>COURSE OBJECTIVE: At the end of this course participants will acquire knowledge to work in area of CAE</i>	Diploma/Degree in Mechanical Engineering
Post Graduate Diploma in Tool design & CAD-CAM <i>COURSE OBJECTIVE: At the end of this course participants will acquire skills in Tool Design & CAD/CAM area</i>	Diploma/Degree in Mechanical Engineering

COURSE	ELIGIBILITY CRITERIA
Post Graduate Diploma in CAD-CAM <i>COURSE OBJECTIVE: After completion of this course the participants will acquire the ability to perform and manage in the area of CAD/CAM.</i>	Diploma/Degree in Mechanical Engineering
Post Graduate Diploma in Tool Manufacture <i>COURSE OBJECTIVE: At the end of this course, participants will acquire skills in the manufacture of tools and dies</i>	Diploma/Degree in Mechanical Engineering
Post Graduate Diploma in CNC Machine Maintenance <i>COURSE OBJECTIVE: To impart and develop skilled manpower to meet the needs of maintenance personnel in CNC machine maintenance</i>	Diploma/Degree in Mechanical Engineering
Certificate in Reverse Engineering & Rapid Prototyping <i>COURSE OBJECTIVE: At the end of this course, participants will acquire skills in Reverse Engineering processes and apply 'Hands-on' training in Rapid Prototyping</i>	Diploma/Degree in Mechanical Engineering
Certificate in Programmable Logic Controllers <i>COURSE OBJECTIVE: In this course the participants will be able perform operations using PLCs independently</i>	Diploma/Degree in Mechanical Engineering
Certificate in CNC Machinist <i>COURSE OBJECTIVE: In this course the participants will be able perform programming & operate high-tech CNC machines independently</i>	Certificate in Milling/ Turning
Certificate in Tool Technology <i>COURSE OBJECTIVE: The aim of this course is to develop entrepreneur in Tool design & Manufacturing especially for the tools like Press Tools, Plastic Mould, Jigs and Fixtures, Gauges, Die Casting Dies</i>	Certificate in Milling/ Turning
Certificate in Metallurgy and Heat Treatment <i>COURSE OBJECTIVE: At the end of this course participants will become familiar with properties and application treatment of alloys and metals, various specifications of steel and testing methods. They will develop Heat Treatment skills and select process parameters independently</i>	Certificate in Milling/ Turning
Certificate in Foundry Technology <i>COURSE OBJECTIVE: At the end of this course participants will be able to work in entry level employment in a foundry shop and start at fresher level in mould preparation, casting and finishing of casting</i>	Certificate in Milling/ Turning
Certificate in Tool Design - Drawing <i>COURSE OBJECTIVE: At the end of this course, participants will acquire skills in Tool Design</i>	Certificate in Milling/ Turning



PROF. EMILY A. AKUNO

Executive Dean | *Faculty of Social Sciences and Technology*

ASSOCIATE PROFESSOR – DEPARTMENT OF MUSIC AND PERFORMING ARTS

E-mail: dean.fsst@tukenya.ac.ke

IN THE FACULTY:

School of Business and Management Studies

School of Creative Arts and Technologies

School of Hospitality and Tourism Studies

School of Information and Communication Studies

School of Social and Development Studies

Centre for Creative and Cultural Industries

RACHEAL, Deputy Youth Ambassador

I am the current East African Community Deputy Youth Ambassador representing the Republic of Kenya. I am also a student at Technical University of Kenya, pursuing a Bachelor's Degree in International Relations and Diplomacy, currently in my final year.

I got the appointment after winning a regional essay competition that was organized by the East African Community, where I emerged the 1st runners up and consequently got appointed as the EAC Deputy Youth Ambassador to Kenya. I got to learn of the writing competition while attached at the Ministry of East African Affairs.

My role as the EAC Deputy Youth Ambassador is to sensitize university students and other youths in Kenya through activities such as sensitization workshops, launching EAC clubs, organizing national convention to discuss issues affecting integration contributing to online discussions through the EAC pages on social media, participating in EAC conferences as the youth representative and being a role model centred on East African Community Integration.

As a student of The Technical University of Kenya, I wish to appreciate the support I have received from the administration, the Department of Governance and Public Policy, my lecturers and the student fraternity. This University has given me a platform to get this appointment by facilitating my Industry-based Learning, which bore fruits. I hope to pursue diplomacy as a career and believe that I will not only represent Kenya at East African Level, but also, at the African Union and United Nations levels.

When I was in high school, I wanted to pursue a career that would ensure I travel a lot around the world. BA in International relations and diplomacy offered by the Technical University of Kenya was the best option I found that guaranteed the realisation of my dreams. I believe this degree offered by TU-K is the best since it emphasizes on practical learning through Industry-based Learning, it facilitates international academic trips such as going to the EAC headquarters in Arusha, Tanzania, the Genocide Museum in Kigali, Rwanda and Uganda. Also, the lecturers are field experts that give real world experience.

Finally, this university supports its students who are innovators, achievers and have potential.

Racheal Omukhulu Makokha



DEPARTMENT OF ACCOUNTING AND FINANCE

DEPARTMENT OF BUSINESS ADMINISTRATION AND MANAGEMENT

DEPARTMENT OF ENTREPRENEURSHIP AND TECHNOLOGY
MANAGEMENT

DEPARTMENT OF MANAGEMENT AND BUSINESS SYSTEMS

SCHOOL OF BUSINESS AND
MANAGEMENT STUDIES



"Professionalism at all levels of management of human, capital and material resources are key to the success of the national economy. This is the virtue we train our students to uphold at all times".

Director: **PROF. ANNE NDEGE-AMADI** | Associate Professor –
Department of Management and Business Systems
director.sbms@tukenya.ac.ke

COMING up with sound business solutions from a technological, professional, analytical and legal point of view can be an uphill task. However, with the right training, business idea generation will seem like a walk in the park. The Technical University of Kenya has the brains, the resources and the might to deliver these skills and knowledge to every business trainee.

With accounting and finance, business information technology, and a wider variety of disciplines to choose from, your career will take off to a whole new level. Furthermore, the School of Business and Management Studies also boasts of the Entrepreneurship Studies portfolio to its stable. With this progressive development, business students now come to study with a key focus on business planning for the future.

Department of Accounting and Finance

This Department is responsible for the teaching of accounting and finance. Accounting and finance are among the most popular and core disciplines in the study of business. Accounting deals with the preparation and communication of accounting records about an organisation, and also covers auditing. Finance on the other hand is concerned with the management of funds of an organisation in the broadest sense.



PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Bachelor of Commerce – Options: Accounting • Finance	• <i>KCSE mean grade of C+ with C in Mathematics and English/Kiswahili, Any group III, Any group II/2nd group III/ any group IV/any group V OR equivalent qualification</i>	9 semesters
Bachelor of Science in Accountancy	• <i>KCSE mean grade of C+ with C Plain in Mathematics and English/Kiswahili, Any group III, Any group II/2nd group III/ any group IV/any group V OR equivalent qualification</i>	9 semesters
Diploma in Accountancy	• <i>KCSE Mean Grade C-minus with D Plain in English, Maths or Business Studies/ Commerce/Accounting/Economics</i>	7 semesters
<i>Intake: September every year</i>		

OTHER PROGRAMMES OFFERED

- Certified Public Accountant (CPA)
- ATC Intermediate & Final

Department of Business Administration and Management

The primary objectives of the Department are: to provide professional education and training opportunities locally, regionally, and internationally, in business administration and business management; to promote learning and research scholarship in these areas and to provide leadership in forging strong relationships between academia and industry stakeholders.

The Department achieves these objectives through: strong academic programmes supported by highly qualified academic staff; solid industry-based learning programmes that prepare students for the real world; strong partnership programmes with industry players through student associations and a rigorous research programmes in collaboration with various stakeholders.

PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS:	DURATION
Bachelor of Commerce – Options: Business Management • Human Resource Mgt • Marketing Management • Procurement and Supplies Mgt. • Entrepreneurship • Insurance	• <i>KCSE mean grade of C+ with C in Mathematics and English/Kiswahili, Any group III, Any group II/2nd group III/any group IV/any group V OR equivalent qualification</i>	9 semesters for KCSE,
Diploma in Business Studies Options: Business Administration • Human Resource Management • Sales and Marketing Management • Procurement and Supply Chain Management	• <i>KCSE Mean Grade C-minus with D Plain in English, Maths OR Business Studies/Commerce/Accounting/ Economics or</i> • <i>Certificate in Sales and Marketing (KPUC OR EQUIVALENT) • Advanced Certificate in Supplies Management (KNEC) • Advanced Certificate in Business Administration (KNEC)</i>	7 semesters
Diploma in Office Administration: Legal Secretarial • Medical Secretarial • Business Secretarial • Foreign Language Secretarial	• <i>KCSE Mean Grade C-minus with D Plain in English, Maths OR Business Studies/Commerce/Accounting/ Economics OR a Certificate in Secretarial Studies</i>	7 semesters
Certificate in: Business Studies • Sales and Marketing • Procurement and Supply Chain Management	• <i>KCSE Mean Grade D Plain</i>	3 semesters
<i>Intake: September every year</i>		

OTHER PROGRAMMES OFFERED

- Bachelor of Philosophy in Business Management – Options: Human Resource • Entrepreneurship • Business Administration • Sales and Marketing
- Bachelor of Philosophy in Office Administration
- Diploma in Management

- Diploma in Banking
- ABE Diploma in Business Management
- ABE Advanced Diploma in Business Management
- ABE Diploma in Human Resource Management
- Advanced Certificate in Supplies Management
- Advanced Certificate in Business Administration
- Certificate in Supplies Management
- Certificate in Business Administration
- ABE Certificate in Business Management
- ABE Certificate in Human Resource Management
- Certificate in Sales and Marketing
- Short Courses: *Business Calculations • Commerce • Store keeping • Business English • Shorthand • Computerized Document Processing (CDP) • Office Procedures • Office Management*

Department of Entrepreneurship and Technology Management

The academic programmes offered in this Department have developed out of the activities of the former Centre for Entrepreneurship, Innovation and Technology Transfer (CEITT). The unit’s new status has led to the development of four primary objectives: to develop skills responsive and relevant to the country’s manpower needs; to prepare trainees for the world of work in salaried and self employment; to spearhead capacity building in entrepreneurship and business development and to support SME development through research and training. These are achieved through, among others, mounting of tailor-made academic programmes, business plan competitions, and a rigorous research programme in collaboration with various stakeholders.



Participants in our short courses and seminars gain practical skills and have their business skills capacities built to enable them achieve the following: Improved business output and profitability; Access to funding for their business projects; Continual support for business management; Induced growth and expansion for their businesses; Professional approach to business ownership; Informed business decision making.

CAREER OPPORTUNITIES ▼

Our graduates have a wide range of career opportunities to become Business Managers in various sectors of the economy including: Banking • Micro finance • Marketing • Government Ministries and Departments • NGOs in Community Development Project as Project Managers or Directors • Management Consultant • Entrepreneurs • Mentors • Business Service Providers • Investment Consultant • Business and Management Trainers

Department of Management and Business Systems

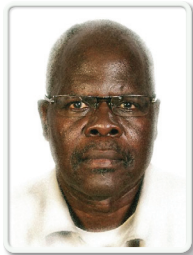
This is a newly created Department that captures the Information Technology-oriented subjects of the business discipline. In its quest for high quality teaching, learning and research, the Department strategically covers the areas of Management Science; Information Systems; Business Information Technology; Operations Management; Project Management; and Logistics and Supply Chain Management.

By the end of the student’s academic life in any of the disciplines above, he/ she is able to creatively and meticulously design business solutions that can bring meaningful change in the real world.

PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS:	DURATION
Bachelor of Technology in Business Information Technology	• <i>KCSE mean grade of C+ with C Plain in Mathematics and Physics, 2nd group II/Any group III, any group II/ any group III/IV/V OR equivalent qualification</i>	9 semesters
Diploma in Business Information Technology	• <i>KCSE Mean Grade C-minus with D Plain in English, Maths OR Certificate in Information Technology</i>	7 semesters
Certificate in Business Information Technology	• <i>KCSE Mean Grade D Plain</i>	3 semesters
<i>Intake: September every year</i>		



SCHOOL OF CREATIVE ARTS AND TECHNOLOGIES



Whenever creativity and technology come together, there can only be one result: **PERFECTION**. And that's why whenever you train with us, your satisfaction is JUST as good as your expectations...

Director: PROF. ODOCH PIDO | Associate Professor – Department of Design and Creative Media
director.scot@tukenya.ac.ke

DEPARTMENT OF DESIGN AND CREATIVE MEDIA
DEPARTMENT OF MUSIC AND PERFORMING ARTS
DEPARTMENT OF FASHION AND TEXTILE TECHNOLOGY
DEPARTMENT OF PRINTING AND MEDIA TECHNOLOGY

THE last decade has seen a tremendous demand for in-house creative services. This has necessitated the need for training in creative arts and technologies. The corporate world today heavily needs industry-ready graduates. To fulfil this need, The Technical University of Kenya has taken the cue, hence the constitution of the School of Creative Arts and Technologies to cover the following areas of study: design and art, music and dance, printing, packaging, performance, electronic and digital media. From idea generation to production, our training processes are legendary, thus making creativity is our middle name.



Department of Design and Creative Media

Some of the disciplines covered in design and creative media include Rendering Techniques, Desktop Publishing, Web Design, Gaming, Animation, Visual Arts and Video Production. The emphasis we lay on design ensures that our learners are given only the best in Interactive Media, Environmental Design and Communication Design. In the teaching and learning process, we provide the theoretical foundations for design at the introductory level of each elective, and then roll out a properly coordinated skills-oriented individual student projects, supervised by the best of instructors in the art of creative media.

PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS:	DURATION
Bachelor of Technology in Design	KCSE mean grade C+ (plus) and at least C+ in English and Art and Design (or a portfolio of graphic design work)	10 semesters
Intake: September every year		

CAREER PROSPECTS ▼

Those who have studied and graduated in Design and Creative Media at TU-K, will find exciting opportunities in publishing houses, advertising agencies, public relations companies, broadcasting houses and multimedia production agencies. Further, with the growing business opportunities in manufacturing, education, health care and agricultural sectors, there has been dire need for creative services in advertising, publishing, packaging and broadcasting. This has in turn driven organisations to recruit creative designers to their workforce, rather than rely exclusively on consultants.

Department of Fashion and Textile Technology

Hairdressing, beauty therapy, clothing technology, fashion design, and garment making are the areas of study in this Department. The Department strongly believes that creativity, technology and craftsmanship must be seamless, and that is why our graduates have a clear and practical edge over their peers. Moreover, our training takes a closer look at the elements and principles of design, to ensure that we deliver skills with utmost aptitude.



PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Certificate in Hair Dressing & Beauty Therapy Cert. in Fashion Design & Garment Making	KCSE D+ (plus)	3 semesters
Intake: September every year		

CAREER PROSPECTS ▼

Our trainees will be absorbed in textile industries such as: Export Promotion Zones, Design houses, Boutiques, Garment manufacturers, Theatres and studios. They can also choose to venture into Consultancy, Self-employment, or seek careers in technical training.

Department of Music and Performing Arts

Performing arts has such areas of art and design as dance, drama, choreography, film and video, and design management. The Department of Music and Performing Arts trains students in the art of practical musicianship and music technology, taking advantage of Kenya's quest for expertise in music and performing arts.

The programmes offered cover the areas of instrumental studies, music performance and practical musicianship, piano technology, music business and media technology, deejaying, music studio management, music recording and marketing. Considerable emphasis is placed on the technological and practical aspects of music and performing arts.

PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Master of Music in Music Education or African Music Studies Master of Musical Arts in Composition or Performance	Bachelor of Music, BA (Music), BEd (Music) Upper Second Class honours or above	4 semesters



PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Bachelor of Music	KCSE mean grade C+ with at least B in Music and C+ in other cluster subjects (English/Kiswahili, Maths and any Group II or any Group III, any Group II or Group III or Group IV or Group V) OR equivalent	10 semesters
Diploma in Music	KCSE c- with evidence of music or Certificate in Music	8 semesters
Certificate in Music	KCSE D+ with an interest and aptitude in music. Participation in musical activities such as music and cultural festivals, drama festivals, Talent Academies, choir, home & studio based recordings, music participation will be an added advantage	3 semesters
Intake: September every year		

CAREER PROSPECTS ▼

Most of our students go into the music industry, working in broadcasting houses, recording companies and into arts management or into postgraduate studies. A variety of career opportunities in the music industry, such as: music director, songwriter, producer, instrument repair and building, piano tuning, conducting, music managers and entrepreneurs, are available. While studying in the department, our students often work with professional concert organisers. They shadow experienced members of staff in such concerts as well as get involved in box office and other front house activities as well.

Department of Printing and Media Technology

The Kenya Polytechnic has been the only institution training in the area of printing in this country. Over the years the institution has trained respected technicians and technologists in this area. The Technical University of Kenya is the first university in East and Central Africa to elevate the printing discipline to degree level. This Department provides training in printing science and technology, media technology, packaging and modern technologies.

The Department provides a comprehensive practical grounding in all aspects



of prepress, press and post press processes and digital media production, preparing students for the diverse and technically advanced print and publishing industry. Our graduates are able to use computer aided design, be highly competent in the use of image-setters for colour separation, scanning techniques, use of process camera, printing from a single colour machine to a four colour machine and the various machines used in printing.

PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Bachelor of Philosophy in Technology (printing)	Higher Diploma in Printing Technology	4 semesters
Diploma of Technology in Printing	K.C.S.E Mean Grade C-	8 semesters
Certificate in: Machine Printing • Print Origination • Print Finishing	K.C.S.E Mean grade D+	3 semesters
Intake: September every year		

SHORT COURSES OFFERED

- Book Repair Maintenance
- Proof Reading
- Machine Maintenance
- Costing and Estimating for Printers
- Plate Making
- Colour Reproduction

CAREER PROSPECTS ▼

By the end of the respective courses, the trainee should be able to work effectively in a printing press, publishing house or in the packaging industry.



DEPARTMENT OF EVENT AND LEISURE MANAGEMENT

DEPARTMENT OF HOSPITALITY AND INSTITUTIONAL MANAGEMENT

DEPARTMENT OF TOURISM AND TRAVEL MANAGEMENT

SCHOOL OF HOSPITALITY AND TOURISM STUDIES



"We are a technological, innovative, practical and application-oriented school of hospitality, leisure services and tourism management in Africa. Guided by the core values of excellence in education, training as well as respect, responsiveness and compassion towards students and staff, we have continued to surpass our peers as far as placement of students is concerned. We want to be your school of choice."

Director: PROF. RICHARD O. B. MAKOPONDO | Associate Professor
– Department of Tourism and Travel Management
director.shts@tukenya.ac.ke

THE SCHOOL of Hospitality and Tourism Studies is focused on producing internationally competitive practitioners, managers and leaders for community-based, county and regional hospitality, leisure and tourism establishments. The degree and diploma programs comprise intensive theoretical and practical training on campus as well as extensive Industry-Based Learning (IBL) and community service. Upon graduation, graduates from SHTS are sufficiently prepared and equipped with the knowledge, skills, technologies and tools to assume responsibility as entry and mid-level supervisors, managers, and leaders within public organisations and government departments, private sector enterprises, international agencies, and community-based organisations.

Department of Hospitality and Institutional Management

The Department of Hospitality and Institutional Management is a merger of the Department of Hotel and Restaurant Management and the Department of Catering and Accommodation Management of the former Kenya Polytechnic University College. The Department offers certificate, diploma and degree programmes on both full-time and part-time basis, as well as other specialized short programs, courses and seminars to promote professional development and life-long learning.

Graduates of our degree and diploma programs are adequately equipped with the knowledge, skills, and tools to be effective business owners, supervisors and entry or middle level managers in professionally run organisations both in the public and in the private sectors.

PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Bachelor of Technology in Institutional Catering and Accommodation Management	KCSE Mean Grade: C+ with at least C+ in subject clusters or Diploma in Technology in: Institutional Catering and Accommodation Management/ Diploma in Housekeeping and Front Office Management or Equivalent. OR a minimum of two (2) principals for A-Levels or Equivalent	14 semesters
Bachelor of Technology in Hotel and Restaurant Management	KCSE Mean Grade: C+ with at least a C+ in subject clusters or Diploma in Technology in: Hotel and Restaurant Management or Equivalent OR a minimum of two (2) principals for A-Levels or Equivalent. Applicants.	14 semesters
BSc. Hospitality Management	KCSE Mean Grade: C+ (Plus) with at least a C+ in subject clusters	14 semesters
Diploma of Technology in: Hotel and Restaurant Management • Institutional Catering and Accommodation Management	KCSE Mean Grade C- with a pass in English and Mathematics or Pass in Certificate in Food and Beverage Service/Certificate in Travel and Tour Operations from KPUC or Equivalent	8 semesters
Diploma in Housekeeping and Front Office Management	Certificate in Housekeeping and laundry operations from KPUC or Equivalent	5 semesters
Certificate in: Catering and Housekeeping operations • Food and Beverage Production and Service • Housekeeping and Laundry Operations	O-level with minimum of D+ or equivalent	2 semesters
Basic Cake Making and Decoration (Non-Examinable) Pastry and Cake and Making (Non-Examinable)	Any interested persons for leisure, domestic or commercial; OR Any formal academic certificate	2 semesters
Intake: September every year		



CAREER PROSPECTS ▼

Because of their practical, hands-on, and application training, graduates find ready employment in Management of Hotels, Hospitals, Hostels, Uniformed Services Mess, Residential Institutions, Cleaning Companies, Laundry and Dry Cleaning firms • Management of Resorts, Lodges, Entertainment Clubs, County Clubs, Cruise Ships, Airline Services, Education and Research Institutions.

Department of Leisure and Event Management

Festivals, special events, sports, entertainment attractions and conventions are increasingly becoming recognised and developed as significant social, economic, and cultural development, as well as community revitalization strategies. To meet the growing needs of the industry, counties, and communities, the Department of Event and Leisure Management offers specialized certificate, diploma and degree programs in fields of leisure, amusement, and entertainment management, special event and convention management, festival planning and management, wedding planning, trade shows/exhibitions, as well as sports events management.

The Bachelor of Science in Leisure and Event Management is the first degree of its kind in the region and sets standards for higher and professional education in planning, designing, implementing, and marketing of special events, conferences and conventions.



PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Bachelor of Science in Event and Convention Management	KCSE Mean Grade C+ (plus) with at least a C+ in subject clusters or Diploma in Technology in: Event and Convention Management of KPUC or an equivalent qualification	10 semesters
Diploma of Technology in: Event and Convention Management	KCSE Mean Grade C- (minus) with at least a pass in English and Mathematics or Certificate Technology of KPUC or Equivalent	8 semesters
Certificate in Travel and Tour Operations	KCSE Mean Grade D+ (plus) and at least a D+ in each subject cluster	2 semesters
Intake September every year		

CAREER PROSPECTS ▼

Graduates can pursue careers in conference organisation, business development, conference event or destination marketing, corporate meeting planning, event and concert production and promotion, festival planning and marketing, wedding planning, special event planning and design, careers in air airlines, cruise lines, resorts, hotels, movie theatres, amusement parks, water theme and parks, arenas, stadia, and trade fairs.

Department of Tourism and Travel Management

This Department offers certificate, diploma, and degree programmes in the areas of tourism and travel management, travel and tour operations, and tour guiding. Further, it offers short specialized courses, seminars, and workshops in rural, county, and community-based tourism planning, development, and marketing, and SME operations and management. Our degree and diploma programs equip learners with the knowledge, skills, technologies, and tools required to be effective as business owners, supervisors, managers, and leaders.

Learners enrolled in our programmes undergo comprehensive theoretical, practical and field exposure to prepare them to succeed in the real world.

PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Diploma of Technology in: Tourism and Travel Management	KCSE Mean Grade C-(minus) with a pass in English and Mathematics or Pass in Certificate in Travel and Tour Operations from KPUC or Equivalent	8 semesters
Certificate in Travel and Tour Operations	KCSE Mean Grade D+ (plus)	2 semesters
Intake September every year		

CAREER PROSPECTS ▼

Our graduates work in the areas of: Management level in Tourism Industry, Tour Companies, Air, Sea, Destination Marketing Organizations, Tour Offices, Rail and Road Travel Sectors.



SCHOOL OF INFORMATION AND COMMUNICATION STUDIES



"The unique mix of socio-cultural studies and information science enhances a seamless flow of information, hence, making the world a better place to live in. We've got a variety of courses that will mould you into a flawless communicator".

Director: PROF. PETER MAINA MATU | Associate Professor – Department of Language and Communication Studies
director.sics@tukenya.ac.ke

DEPARTMENT OF INFORMATION AND KNOWLEDGE MANAGEMENT

DEPARTMENT OF JOURNALISM AND MEDIA STUDIES

DEPARTMENT OF LANGUAGE AND COMMUNICATION STUDIES

THE SCHOOL of Information and Communication Studies provides students with a comprehensive understanding of the social, political, economic and cultural impact of information and communication theories and practices. The School offers programmes in information studies, knowledge management, communication studies, journalism, linguistics, translation and interpretation, and international language courses such as French, German and Chinese. Students will be prepared for a broad range of careers in areas such as mass media, advertising and public relations, community relations, research and communication, information governance and policy, and information and knowledge management industry.

Department of Information and Knowledge Management

Information and knowledge are key pillars of organisational performance, excellence, competitiveness, growth and innovation and client satisfaction. Information management is concerned with the life cycle of information while knowledge management is the capital owned by people and staff of an organisation in terms of their know-how and expertise, competencies and experiences. The Department of Information and Knowledge Management offers programmes in information studies through an inter-disciplinary approach with specializations in knowledge management, library and information studies, records management and publishing and media studies. Knowledge management will prepare trainees to assist organisations discover and manage tacit, explicit and embedded knowledge and conduct knowledge management mapping and audits, advise on relevant and suitable information and communication technologies for knowledge management, and develop knowledge management strategies for organisations. The graduates will be expected to contribute to improving professional ethics and standards.



PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Master of Science in Information and Knowledge Management	• <i>BSc /BTech in Information Studies upper Second Class Honours or above</i>	4 semesters
Bachelor of Science in Information Science	• <i>KCSE mean grade C+ (plus) and at least C+ in cluster subjects</i>	10 semesters
Bachelor of Technology in Information Studies	• <i>KCSE mean grade C+ (plus) and at least C+ in cluster subjects</i>	10 semesters for KCSE

PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Diploma in Technology (Library & Information Studies)	• <i>KNEC Cert. in Information Studies or KPUC Cert. in Library Studies or C-(minus)or Div.III</i>	7 semesters
Diploma in Technology (Archive and Records Managements)	• <i>KNEC Cert. in Information Studies or KPUC in Archives and Records Management or C- (minus) or Div. III</i>	7 semesters
Certificate in: Archives and Records Management • Library & Information Studies	• <i>KCSE D+ (Plus)</i>	2 semesters
Intake: September every year		

Department of Journalism and Media Studies

Media plays an important role in society as agent of change, governance, development, transformation and information. The Journalism specialisation provides knowledge and experience with emphasis on excellent writing, original reporting, and innovative use of digital tools for storytelling. The media studies specialisation emphasises critical, cultural, historical, legal, ethical and social scientific analysis of media and society while also providing experience in media production.

The Department trains students to understand and interpret journalism and media in their social, political, technological, legal and economic contexts. Trainees are grounded in the theory, art, practice and values of journalism and media and are expected to implement a broad range of public relations programmes such as brand management, media relations, marketing communications, employee and executive communications, change management, corporate social responsibility, fundraising and corporate philanthropic programmes.



PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Bachelor of Technology in Journalism and Mass Communication	• <i>KCSE Mean Grade C+ (plus) and at least C+ in English or Kiswahili and a pass in Mathematics</i>	10 semesters
Diploma of Technology in Journalism and Mass Communication	• <i>KCSE mean grade C- (minus) and at least C- in English, C- in Kiswahili and a pass in Mathematics</i>	8 semesters
Diploma in Photography and Audiovisual Technology	• <i>KCSE mean grade C- (minus) and at least C- in English, Kiswahili and a pass in Mathematics or</i> • <i>Certificate in Photography and Audiovisual</i>	8 semesters
Certificate in Photography and Audiovisual	• <i>KCSE D+ (plus) with interest in photo journalism</i>	3 semesters
Intake: September every year		

CAREER PROSPECTS ▼

Our graduates work as writers, reporters or editors in newsrooms – print or electronic – and owing to the practical skills acquired, they will be able to handle journalistic equipment and processes with a lot of aptitude. They also have the choice to work as communications and public relations experts, and will work as the link between the organisation they work for and other stakeholders.



Department of Language and Communication Studies

Language and communication are unique and fascinating abilities in human interaction. Whereas the disciplines are traditionally found in the arts faculty, they play a key role in packaging and disseminating the ever-changing scientific and technological knowledge. The Department of Language and Communication Studies offers programmes in two main strands: languages and communication studies. The programmes aim at producing highly competent specialists in the identified fields who understand the nature and function of communication in the modern world and are able to produce text – written and spoken – in a variety of areas. In addition, there are opportunities to develop high-level multilingual communication skills in a translational context. The Department also hosts two key units that offer teaching services to all the other Departments in the University: Communication Skills Unit and English Language Teaching Unit

CAREER PROSPECTS ▼

Our graduates should be able to: design communication programs; be effective communicators; Write and communicate technical information as well as work as Communication officers in various institutions. They should also be able to package messages using appropriate communication choices, possess sophisticated knowledge and develop their own approaches to communication phenomenon.



DEPARTMENT OF CRIMINOLOGY AND LEGAL STUDIES

DEPARTMENT OF ECONOMICS AND RESOURCE MANAGEMENT

DEPARTMENT OF GOVERNANCE AND PUBLIC POLICY

DEPARTMENT OF HUMAN AND SOCIAL DEVELOPMENT

SCHOOL OF SOCIAL AND DEVELOPMENT STUDIES



“The unique mix of socio-cultural studies and information science enhances a seamless flow of information, hence, making the world a better place to live in. We’ve got a variety of courses that will mould you into a flawless communicator”.

Director: DR. BENSON ATENG | Senior Lecturer –
Department of Economics and Resource Management
director.ssds@tukenya.ac.ke

SCIENCE and technology programmes are typically designed to improve the quality of human life and enhance human productivity within society; consumers of these technologies therefore need to be prepared to embrace continual change. The School of Social and Development Studies, therefore, fulfils the goal of training future policy makers, scholars and practitioners on social development and public policy.

The School offers multi-disciplinary social sciences courses at both degree and diploma levels in community and social development, economics and development, governance and political studies, criminology and legal studies, and psychology and human relations. The programmes offered mitigate societal distress posed by complex technological innovations, and capacity-build professionals to live functional lives.

Department of Criminology and Legal Studies

The Department of Criminology and Legal Studies provides training to legal assistants capable of performing their duties under the general direction of a lawyer. Programmes in legal studies and criminology provide a framework for understanding and gaining insight into social problems that relate to law, justice, crime, and the social impact of the criminal justice system within the context of reforms in law enforcement, judicial system and correctional agencies. Students are grounded in the theory and practice of law and criminology through the interdisciplinary knowledge of law, criminology, criminal justice, sociology and security. The legal studies programme covers critical areas of criminology, criminal justice, human rights, criminal law, forensic science, victimology and penology.



PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Bachelor of Arts in Legal Studies	KCSE c+ and cluster subjects	10 semesters
Diploma in Legal Studies Diploma in Criminology and Security Studies	KCSE Mean Grade C-minus and D Plain in Maths OR any relevant advanced certificate from a recognised institution or Certificate in criminology and Security Studies	7 semesters
Certificate in Criminology and Security Studies	KCSE D+	3 semester
Intake: September every year		

CAREER PROSPECTS ▼

Graduates can pursue career opportunities in the police and correctional services, the court system, advocacy, legal administration, community legal service, police development, investigator and title examiners.

Department of Economics and Resource Management

The Department of Economics and Resource Management presents an integrated look at matters of policy and economic development. The Department applies time-tested avenues of achieving a number of academic and research objectives. The Department is responsible for the teaching of economics and development studies, with development studies understood in the broadest sense as typically handled in economics programmes.

One of the fast growing areas in the study of economics is the spatial distribution of economic activities, whereby the question of space is brought to bare on economic decisions. This Department offers degrees in: Economics; Natural Resource Management as well as Master’s Degrees in the same areas.



PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Bachelor of Economics	KCSE mean grade of C+ with C Plain in Mathematics and English/ Kiswahili, Any group III, Any group II/2nd group III/any group IV/any group V OR equivalent qualification	9 semesters
Intake: September every year		

Department of Governance and Public Policy

Governance and public policy find common ground in their study of the state, government, non-governmental organisations, multilateral institutions, United Nations agencies and politics in general. Scholarship, research and interest in the Department focuses on the science and art of government, the form, policies, organisation and administration of the state, and the regulation of state relations with other states and non-governmental organisations.

The Department of Governance and Public Policy is the University’s centre

for leadership training. It is constituted to provide knowledge and skills that target the honing of practitioners in the broad areas of governance and administration. It further aims to train individuals to enable the community deal with various challenges. Through the teaching of Emergency and Disaster Management, the Department prepares learners psychologically and intellectually to face and help others negotiate calamities at individual and collective levels. The Department further trains learners in matters of international concerns, including diplomacy, peace and security, international relations, governance, leadership, public administration, political studies and conflict Management.

PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Bachelor of Arts in International Relations and Diplomacy	- Diploma in International Relations and Diplomacy or Diploma in International Studies - KCSE mean grade C+ (plus) and at least C+ in cluster subjects	10 semesters for KCSE, 5 semesters for Diploma
Diploma in Technology in Disaster Management	KCSE C- mean grade	8 semesters
Certificate In Disaster Management	KCSE D+ mean grade	3 semesters
Intake: September every year		

CAREER PROSPECTS ▼

Graduates of International Relations and Diplomacy will find opportunities in International organisations, civil service, security agencies, NGOs, foreign missions and multinationals. They will engage in consultancy on political risks, tourism management, policy and governance issues. Social Work and Community Development graduates will be placed in civil service, local and international NGO’s, rehabilitation centres, health care centres, academic institutions, financial institutions, judiciary, charitable children institutions, homes for aged, faith based organisations and SME.

Department of Human and Social Development

Society currently faces social, economic, political and technological transformations, all of which impact immensely on human relations. The societal dysfunctions caused thereof can be managed by professional social workers with skills and knowledge to adequately sensitize consumers of the dangers posed by the dynamic technological advancement.

Professional social and community development workers require skills such as community resource mobilization and management, community capacity building, fundraising for project sustainability, managing community based projects, social reintegration and rehabilitation, gender and development. The Department of Human and Social Development trains competent professionals who can promote sustainable social change and enhance problem solving in human interrelations. The programmes offered target both the private and public institutions such as local and international non-governmental organisations, faith based organisations, development agencies and other non-state intervention agencies.

PROGRAMMES OFFERED	MINIMUM ENTRY REQUIREMENTS	DURATION
Bachelor of Science in Counselling Psychology	KCSE mean grade C+ (plus) and at least C+ in cluster subjects	10 semesters
Diploma in Counselling Psychology	KCSE C-	8 semesters
Certificate in: Counselling Psychology	KCSE D+ (Plus)	2 semesters
Intake: September every year		



SHORT COURSES OFFERED

- HIV/ AIDS Counselling (Holiday)
- Drug and Substance abuse (Holiday)
- Stress Management
- Pre-marital Counselling
- Loss and Grief Counselling
- Basic Counselling Skills

CAREER PROSPECTS ▼

Trainees are expected to find employment in orphan homes and rehabilitation centres, Health institutions and NGO’s, Prisons, teaching institutions, nursing homes, police department, social and community health departments, human resource departments, industrial/organisational.

CENTRE FOR CREATIVE AND CULTURAL INDUSTRIES



Director: DR. GARNET OLUOCH-OLUNYA

*Senior Lecturer – Department of Language
and Communication Studies*

ccci@tukenya.ac.ke

TU-K recognises the rapid growth in the industry peopled heavily by school-leaving youth, and positions itself to equip the artists and artisans with relevant technical skills and information. This is to be achieved through collaboration with other schools and institutions of creative and performing arts in the country to offer short and long courses that range from providing basic skills to improving specific areas of the practice. The departments in the centre has therefore mounted courses for practitioners in the industry, learners hoping for international qualifications and young scholars aiming to develop technical ability in specific creative genres, through tailor made courses for specific requirements. The versatility of the programmes in CCCI will ensure that at any given time, any creative and cultural practitioner can receive further training and/or retraining.

The centre's activities include teaching, training, research, documentation and technology development and transfer. It provides hands-on skills and technical development through application of knowledge in a practical learning environment. The activities in the centre represent a recognition of the reality in the industry, and are an endeavour to prepare players for that industry, while tooling existing practitioners for higher achievement, including those in the informal and small scale industry, Jua Kali.

Industrial and Fine Arts

The area of design for graphics, fine art, fashion, print and electronic publication etc requires skill

THE Centre for Creative and Cultural Industries (CCCI) is established to help meet the nation's demand for technical skills necessary for practice in the creative and cultural industries. The Centre is the University's way of reaching out to the real world with practical skills. Its main focus is tooling of practitioners at various levels of expertise and/or professional development with knowledge, skills and techniques to function professionally in the industry.



and diligence. These skills are applied in both large and small industries. The department will utilise current trends in the industry to propel learners to apply skills and creativity in response to demand and for dedicated clientele. Applied creativity ensures that learning leads to processes and products that meet the needs of the real world.

Media and Creative Communication

The art of generating words, be it for reporting, narrative or advertising, constitutes a significant element in the creative process, and hence the creative and cultural industries. The department facilitates the development and honing of creative skills in generating scripts and storylines, and reporting of events in writing, as well as applying relevant media for this activity.

Multimedia Arts and Technologies

There's a robust growth in the development and application of media for communication and creative output. Printing technology continues to

evolve, spurred by recent trends in IT that include animation. Together with other interactive programmes, they constitute an expressive form with great potential for economic growth and development. Teaching and learning in this area enables learners to communicate effectively by converting concepts into images thereby transferring ideas into messages through the use of animation and other IT-based media.

Performing Arts and Culture

Performing Arts and Culture focuses on training in music, dance, theatre and film. It offers professional training, tailor-made instruction that includes one-on-one tutorship, skill development and self-advancement programmes for performers, producers and related creatives in the industry. Some of the courses include script writing, directing, acting, dancing, choreography, song writing, music scoring, arrangement and orchestration, instrumental and vocal tuition and coaching as well as production, management and marketing of creative output.

take a walk. in the park...



OUR VISION

To be a top rated University of technology

OUR MISSION

To provide technological education and training and to contribute towards the advancement of society through research and innovation

OUR MOTTO

Education and training for the real world

OUR MANDATE

To train high and middle level personnel for both public and private sectors.

NAIROBI •

Nairobi is the economic, political and governmental capital of Kenya. By virtue of hosting The Technical University of Kenya, it is in its own right at the heart of higher education in the country. When you enrol at The Technical University of Kenya, you are sure to receive the most diverse education and training that will take you places. We are at the centre of East Africa's largest capital, and that gives you the most exciting and conducive learning environment. This sure, makes your pursuit for career opportunities almost... Like a walk in the park.

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